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FEBRUARY 1984 / $2.00

WEEDS TREES & TURF

The Magazine of Landscape and Golf Course Management Since 1962

Design/Build Concept Favored by Contractors

Sewage Sludge Compost as a Turf Fertilizer

Azaleas Hardy Enough for Northern Landscapes

Bellcourt in Los Angeles was constructed and is maintained by Environmental Industries.

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3915

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FEBRUARY 1984 VOLUME 23, NUMBER 2

WEEDS TREES & TURF

The Magazine of Landscape and Golf Course Management Since 1962

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The rebuilt field at the Los Angeles Coliseum looks great but the roots are still causing turf consultants worry. Man-on-location Steve Cockerham describes the lingering concern as the Summer Olympics approach.

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More than half of landscape construction in the future may be done by design/build firms for three major reasons.

48 Success Seems Only Natural At Theodore Brickman

The largest design/build company in the U.S. got that way by playing both offense and defense, says president Dick Brickman.

56 Riding the Tide: Waves Come and Go In Houston

Young Houston landscape contractor Bill Orr concentrates on building relationships to keep his Sun Belt business healthy.

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Being the biggest is not the motivation at Environmental Industries. People like Bruce Wilson set the pace.

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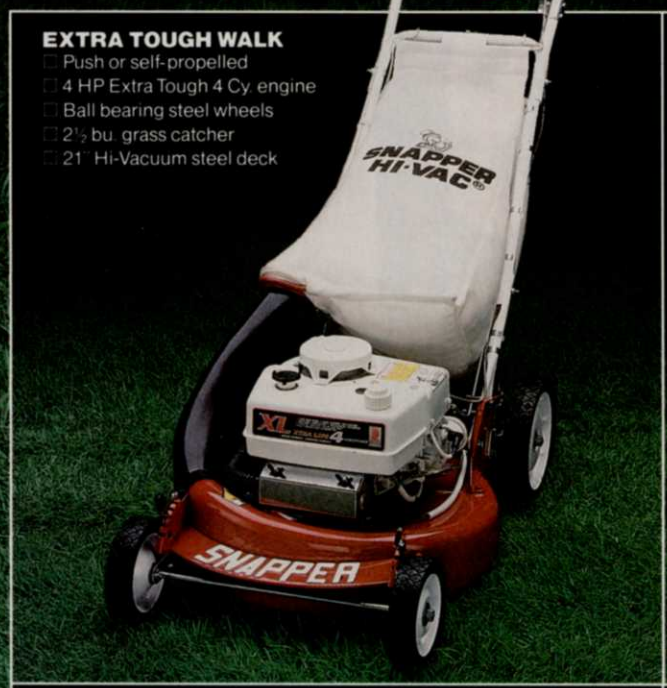

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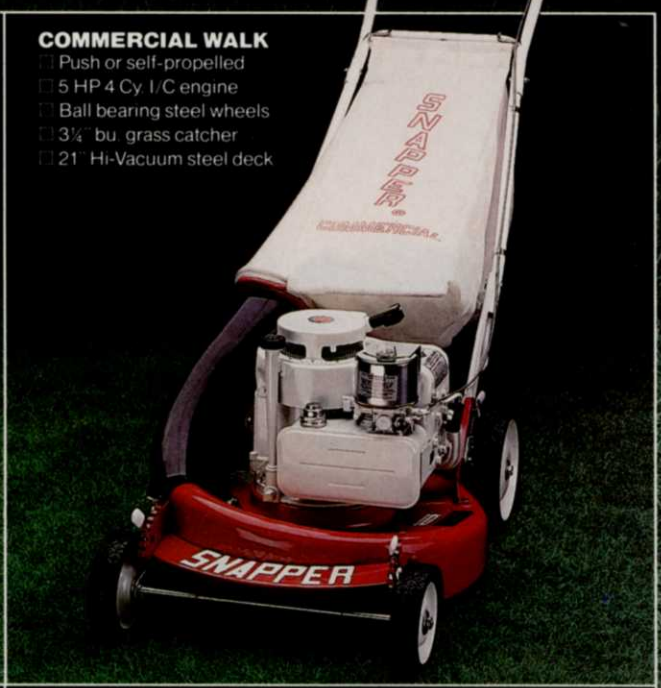

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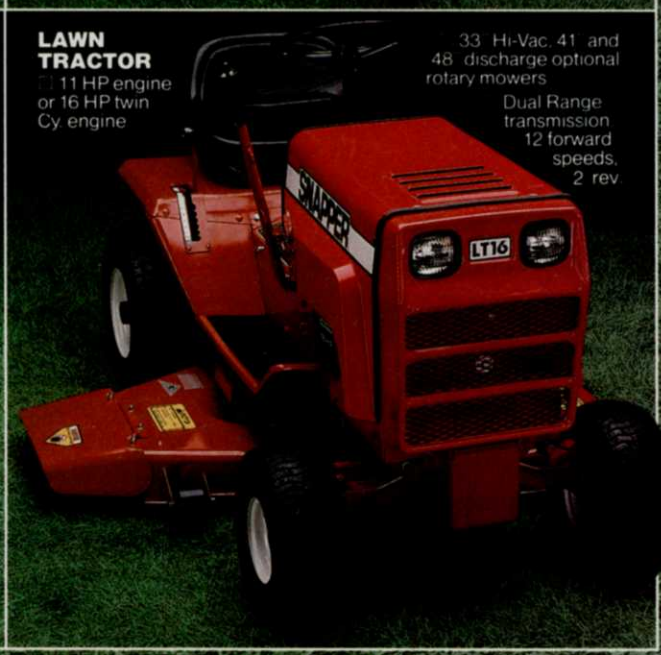

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It works.

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AND THEN THEY'RE DEAD.

OFTANOL STOPS THEM COLD.
Applications of OFTANOL, properly timed, will control existing populations of sod webworm larvae, billbug larvae, chinch bugs, and Hyperodes weevil larvae. It works.

Mobay Chemical Corporation
Specialty Products Group
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Circle No. 132 on Reader Inquiry Card

by Bruce F. Shank, executive editor

Housing starts to top 1.7 million as mortgage rates stabilize

Another 340,000 residential lawn care accounts will be born in 1984 as housing construction matches or exceeds 1983 at 1.7 million starts. Lawn care companies currently serve 20 percent of all single-family residences in the U.S. according to a *Lawn Care Industry* magazine survey.

The average price for a new home in 1984 will be $99,600 according to Chase Econometrics, and existing home prices will average $91,500. Sales of existing homes should rise to 3.2 million this year says Chase.

This is good news for lawn care companies since the wealthier homeowner is more likely to use their service.

Manufacturers invest in R&D, plant efficiency over capacity

Chemical manufacturers are concentrating on quality instead of quantity as the recession lifts. Rather than placing all their resources in rebuilding inventories, they are investing in new products and plants with similar production capacity but greater efficiency, according to a recent *Chemical Week* forecast.

Monsanto is expanding its research facilities outside St. Louis to develop new products in human health, animal nutrition, and plant growth regulation. CW reports R&D budgets for specialty chemicals will increase 14 percent in 1984 compared to nine percent for commodity chemicals. This is a sign of confidence in a steady recovery and in specialties.

A recent Chemical Manufacturers Association poll predicts plant investment to increase by ten percent as manufacturers opt for efficiency over capacity, learning a lesson from the steel industry.

Price increases overall should be in the two percent range, determined by comparing anticipated production to value of shipments. Price increases for specialty productswill be closer to eight percent in 1984.

High office vacancy rates slow construction in some cities

The sun isn't shining quite as brightly as before in Houston for construction companies since office vacancy rates rose this year. Landscape contractors are finishing up existing contracts for office buildings now, says Houston landscaper Bill Orr. "Many completed office buildings stand largely empty," said Orr.

A number of major cities are reporting higher than average office vacancy rates. Companies are looking closely at office space costs right now and have trimmed growth and hiring plans.

WT&T

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For a series of eight tech sheets on Oregon grown chewings and creeping red fescues, call or write

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RESEARCH

Lawn care overall gets good marks

The typical lawn care customer is more than 30 years old, makes more than $25,000 a year, and is most interested in the convenience and extra time he or she gains by using a professional lawn care firm.

That's how the market is viewed by the Mobay Chemical Co., which recently commissioned an independent research firm to conduct a telephone and personal interview survey of several hundred lawn care customers throughout the country.

In her report at the fourth annual Professional Lawn Care Association of America convention, Carol Scott of the Barickman Co. said her firm's research indicates that, "overall, you've done a good job." More than 80 percent of the customers surveyed said they were satisfied with the work done by their lawn care firm, while only 10 percent were dissatisfied.

Scott commented on the following points, which the survey indicates were the major reasons why customers use professional lawn services.

■ Convenience. "The most important factor." She noted that lawn care businessmen report that younger, professional, two-income family customers are on the rise.

■ Standing in the community. "Many customers concede that neighborhood peer pressure is a factor in their decision."

■ Pride. Residents want "that lawn to enhance the image of their home and their community."

■ Safety. "They want professionals to apply lawn chemicals because they're concerned about possible harmful side effects."

Scott also had several suggestions based on discussions with the few dissatisfied customers contacted in the survey. "Prompt service and reliability are of paramount importance to your customer," she said, adding that "careful scheduling, timely, and consequently, effective treatments," are the best ways to keep customers happy.

Other points to remember include:

■ Courtesy. "Indifferent attitudes on the part of your personnel will only alienate customers."

■ Communication. Providing information about the chemicals applied and "explicit concern for the health of your customer's lawn is going to help you."

■ Good taste. Women make as many decisions regarding lawn care as men, so females "should not be overlooked or offended by your marketing efforts."

SUPPLIERS

Demand triggers remodeling at Andersons

Responding to changing marketplace conditions and increased demand for its products, the Andersons have renovated their production facilities in Maumee, OH.

Two new fertilizer mixers and two production lines are now operational after extensive remodeling and construction at the fertilizer company's headquarters.

The Andersons manufacture nearly 400 lawn care products, and Mike Cole, lawn division marketing manager, said that changing purchasing habits demanded the firm increase its flexibility in processing orders.

In the past, customers generally purchased all their fertilizer lawn care products in early winter for use throughout the year, Cole explained. But now, more and more people are buying their supplies only as soon as they are ready to use them.

"This continual compressing of the lawn fertilizer season means we often must be ready to furnish our customers with a large amount of product during a very short period of time," Coles commented.

The firm hopes the new production facilities will give it added efficiency and flexibility.

Newly renovated *Andersons fertilizer facility will provide increased efficiency and room to grow.*

PEOPLE

Walden promoted to E-Z-Go v.p.

L.T. Walden, Jr., has been promoted to vice president of customer service at the E-Z-Go golf cart company, Augusta, GA.

Formerly director of service and distribution, Walden has been with the firm since 1962 and has held a variety of positions with the subsidiary of Textron, Inc. In his new position Walden will be responsible for E-Z- Go's

continued on page 12

AMERICA'S NUMBER ONE WEAPON IN THE WAR AGAINST CRABGRASS.

The overwhelming choice among America's biggest lawn care companies is Betasan® for crabgrass control.

In fact, in a survey of 75 of the largest companies, Betasan is used by four out of five.

It's not hard to see why. Because year after year, Betasan gives lawn care professionals better control of Smooth and Hairy Crabgrass, without a worry about damaging existing turf. One application usually stops crabgrass cold, all year long.

Betasan is easy to apply and available in liquid and granular formulations.

Betasan is safe and effective on established bluegrass, fescue, bentgrass, Bermuda grass, annual and perennial rye, Zoysia, bahia, centipede and St. Augustine.

So when the battle with crabgrass is your number one priority, use the number one crabgrass control.

Betasan. The first choice on the home front.

Always follow label directions carefully.

Stauffer Chemical Company, Agricultural Chemical Division, Westport, Connecticut 06881.

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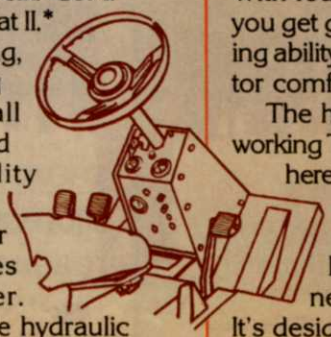
Agile as a cat

Jacobsen Turfcat II gives you all the moves for quality cutting.

Get the agile machine with the moves of a cat. Get a Jacobsen Turfcat II.* It's a fast-moving, clean-cutting mower. With all the power and maneuverability you need.

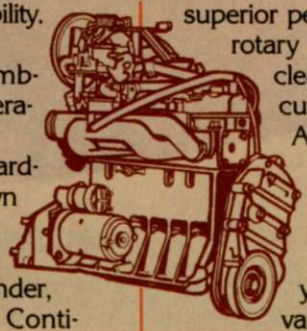


Smooth power steering makes your job easier. The dependable hydraulic design saves time and fatigue, while increasing productivity.

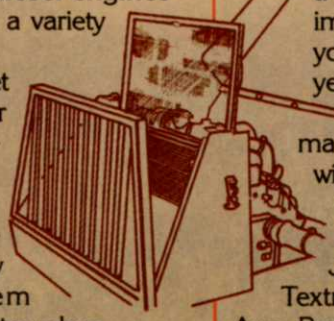
Turfcat II grips the ground with hydrostatic traction. Just a touch with your right foot delivers variable speed for precise maneuvering. And your left foot pedal can hydraulically raise or lower any mounted implement for easy transport.

Four-wheel wide track stance provides excellent stability. With four large tires, you get good curb-climbing ability, and real operator comfort.

The heart of the hard-working Turfcat II shown here is a rugged 23 hp, 51.6 cu. in., 4-cylinder, liquid-cooled Continental gasoline engine. It's designed for durability, performance and long life. Other gasoline and diesel engines are available in a variety of sizes.



And you'll get cleaner, cooler engine operation with our special dual screened radiator. A handy warning system alerts the operator when to clean screens—for longer engine life.



Best of all, you'll like the superior performance of the rotary decks. You get a clean, smooth quality cut on all types of turf. And the agile Turfcat II handles extra close trimming with ease.

Turfcat II offers you lots of other advantages. Like easy service access; an extra large air cleaner; and a mechanical or hydraulic P.T.O. drive with a wide choice of implements to give you a complete year 'round system.

So if you need a fast, maneuverable machine with all the moves, pounce on a Turfcat II.

It's as agile as a cat. Jacobsen Division of Textron Inc., 1721 Packard Ave., Racine, WI 53403. J-1-4

*Choose from five models, diesel and gasoline, with three-wheel or four-wheel configurations and a variety of deck sizes.

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Engineered from the ground up.

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UPDATE

A super's best friend

"I'm sold on them. A person can do anything a computer can do, but it's not as easy or as efficient."

Those are the sentiments of James F. Moore, golf course superintendent at Ridgewood Country Club in Waco, TX, and president of the Texas Turfgrass Association.

As computers and "computerese" creep their way into more and more industries, Moore told an audience at the recent Texas Turfgrass Association Convention in Houston, that superintendents can do their jobs more efficiently and in less time with a little help from a personal computer.

Moore applied his $4200 system to six areas of his job: equipment maintenance, employee records, daily records, available products, budget and communications.

"It can do as much or as little as you want it to," he said.

One of the largest areas where his computer has come in handy is in the equipment maintenance area.

"With a computer, you can easily keep a record of every repair on a piece of equipment and when it was made and why," he said. "This helps tremendously when you have to convince a greens committee it's time to buy a new piece of equipment. You have a complete record of everything done.

"I could live without a computer on the job, but I'd hate to try now that we have one."

Watson on maintenance levels

Developing a long range plan for maintenance levels on your course -- one that is approved by the club's membership and is greens committee-proof -- is one of the best ways to insure first-rate course maintenance, according to James Watson, vice president of customer relations and agronomist with the Toro Co.

Watson, speaking at the Texas Turfgrass Conference in Houston, said it is up to the superintendent to keep the lines of communication open between the membership and greens committee to insure proper maintenance levels.

"No matter what your budget, strive for consistent application of fertilization, watering, mowing, cultivating and disease, insect and weed control," said Watson. "Of course the intensity with which you go about any of these boils down to the budget."

Watson also said a thorough soil analysis for texture, structure, porosity, air-water relationships, compaction and organic matter is important before application of cultural practices.

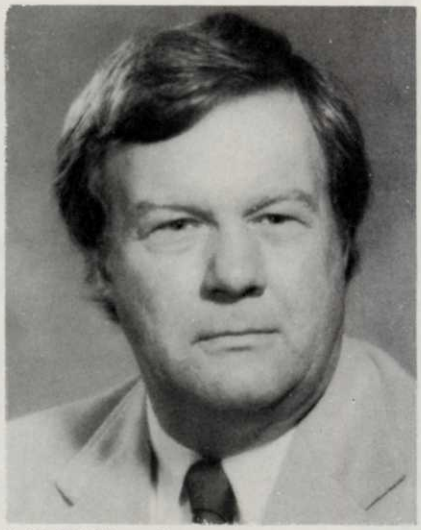
Course development almost in a boom

Golf's growing popularity and lower interest rates are being credited with an increase in new golf course development.

The National Golf Foundation's Golf Facility Development division reports it supplied more than 100 golf course planning groups in 31 states with basic golf course planning and operational information, including estimated course development costs, to assist them in developing new golf facilities.

Requests for help came from all over the country and pertained to all types of courses.

E-Z-GO *from page 8*



L.T. Walden, Jr.

traffic, order entry, service parts, warranty, field service and quality assurance departments. He also oversees the firm's service training schools and currently is acting director of project engineering.

CHEMICALS

Monsanto expands research facilities

The Monsanto Co. has announced plans to build a multi-million dollar addition to its research and development facilities currently under construction in west St. Louis County, MO.

The addition includes a two-story building that will house process-development laboratories for the firm's plant-growth regulator, animal-nutrition and human health-care products. Scheduled for occupation by late next year, the new facility is to be fully operational by 1985.

According to a Monsanto spokesman, an estimated $150-$170 million pricetag for the entire facility is "within the ballpark" of the project's cost, including the new addition.

CONFERENCES

Houston conference tops ever, draws 760

The Texas Turfgrass Association's 38th Annual Convention and Trade Show attracted more than 760 registrants, the group's largest turnout ever.

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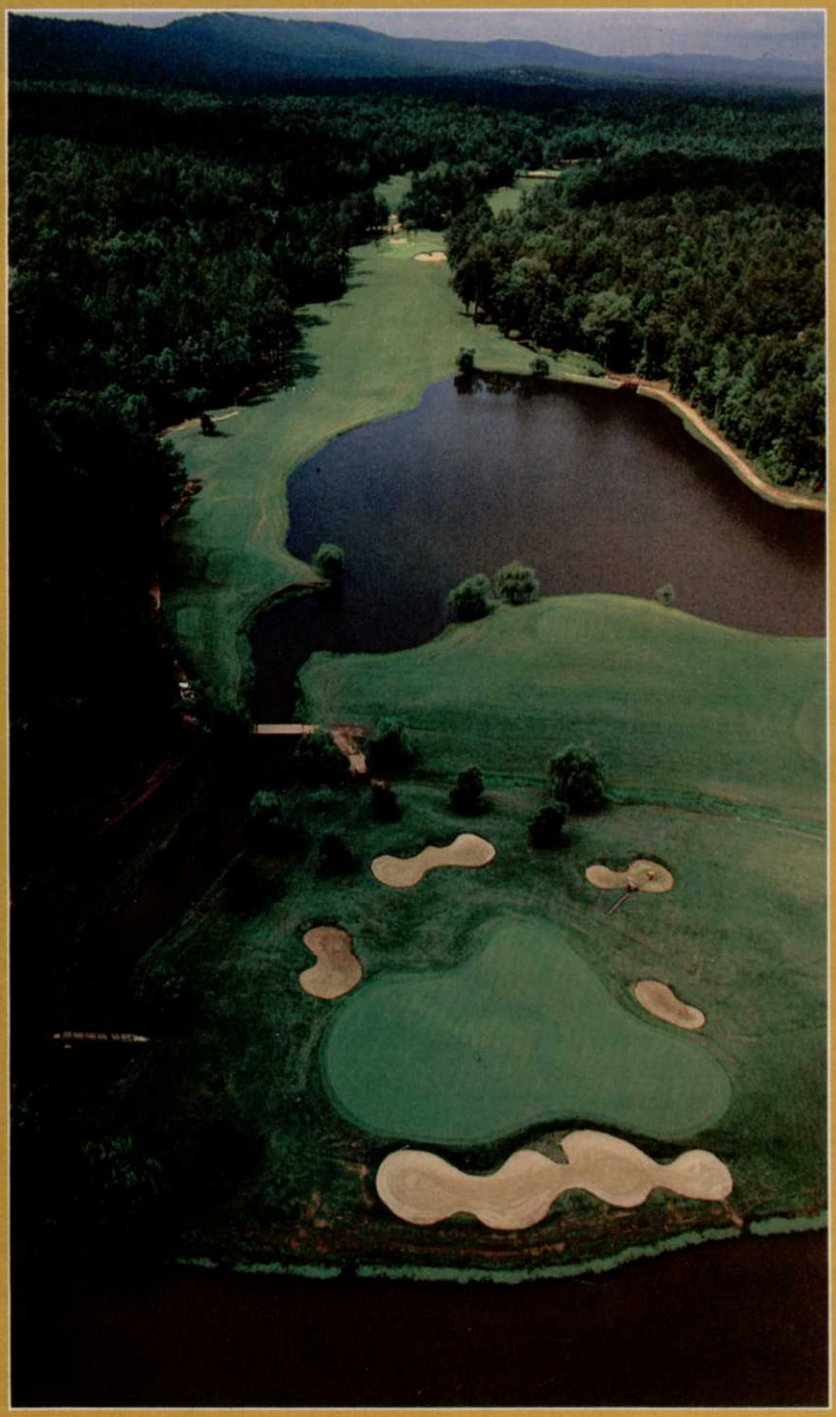
1984 PGA putts on PENNCROSS



18th green at Shoal Creek, Shoal Creek, Alabama

Shoal Creek, Alabama

At the rugged Shoal Creek course, host of the 1984 PGA Championship August 16-19, 1984, the touring professionals will again be putting on Penncross creeping bentgrass. Penncross and Penneagle, the Penn Pals, are no strangers to the pros. Most of the recent major championships have been played on one or the other. The Western open at Butler was played on Penneagle fairways and greens. The 1983 US Open at Oakmont was played on Penneagle tees, fairways and greens. Maybe you saw the sixty-foot putt on Penneagle.

So, when the Shoal Creek course was designed, it's no wonder Penncross was specified for the putting surface. It was a 'natural' to choose Penncross bentgrass, with its glorious history, for a course with a sparkling future!

The PENN PALS

Penneagle's Oregon certified blue tags qualify for cash awards to qualifying turf organizations for turf research. Call our toll-free number for details.

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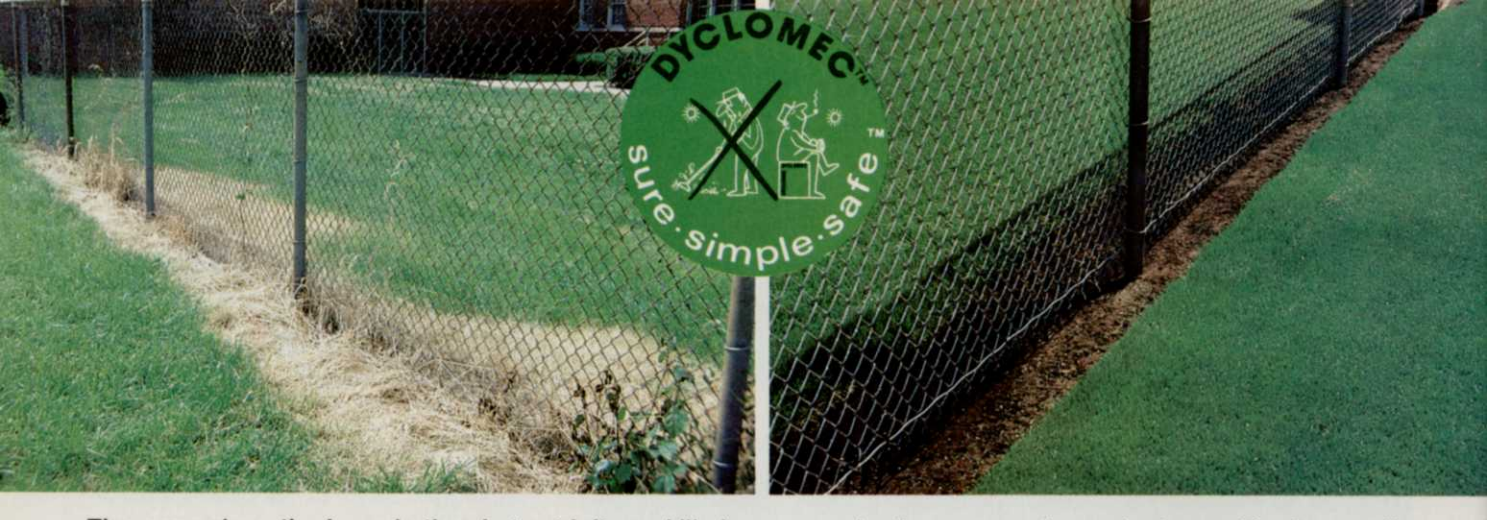


The grass along the fence in the photo at left was killed with a fast-acting systemic post-emergent herbicide. Obviously, no professional groundskeeper could abide this ugly mess, so the dead vegetation has to be removed with expensive hand labor. The systemic product is recommended for lawn renovation so, naturally, vegetation will grow back as new seeds germinate, resulting in an endless cycle of retreatment, ugly dead vegetation and more hand labor. Clean up a fence line with Dyclomec and vegetation will never again be a problem, because an annual pre-emergent application of Dyclomec will form a vapor barrier and keep the area absolutely clean.

Dyclomec turns Problem Areas into Beauty Spots

... and the vapor barrier eliminates repeated investment of hand labor to clean out dead vegetation.

Dyclomec is surely the most efficient herbicide that has ever been offered to professional landscapers. In fact, it is called the *landscaping herbicide*.

Now, at last, the groundskeeper can easily and economically achieve that manicured look, which consists of contrast. Of sharply defined areas where immaculate turf is contrasted with areas of beautiful, naked earth. Where ornamentals grow in an area of beds that are free of any distracting growth.

Until the advent of Dyclomec, such pristine landscaping could only be achieved with repeated investments of hand labor to clean out dead vegetation resulting from an endless cycle of regrowth and retreatment with a systemic herbicide.

But once an area has been cleaned up with Dyclomec, hand labor to remove dead vegetation will never again be necessary because an annual application of Dyclomec will keep the area absolutely clean. How is this possible?

On the page at the right are step-by-step illustrations of how Dyclomec works. Understanding its principle will help you discover the many labor-saving, money-saving ways it can help you in landscape maintenance.

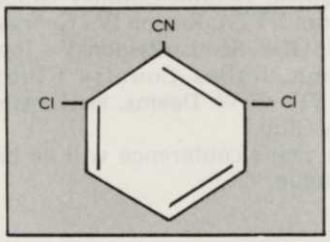
We urge you to read it carefully and call us toll free if you have any questions.

Dyclomec Applicator for Uniform Distribution

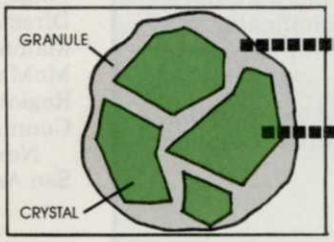
Because proper distribution of Dyclomec is important, this patented Acme Spred-Rite® G Spreader is the ideal tool. Granules are gravity-fed through deflector spikes that give a uniform pattern. Hold the head high for a wide swath; lower for a narrow swath; remove it for the finest line of control. Regulate flow with interchangeable orifice disks. Spreads any granular material. Lightweight. No moving parts.

Dyclomec with its pre-emergent and post-emergent action is ideal for vegetation control in mulch, or bark around roses and ornamentals, or in flagstone and gravel walkways. It works its way down to the ground and forms a vapor barrier which provides season-long weed control and maximum safety to desirable plants.

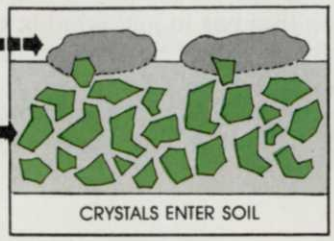
How Dyclomec controls weeds without harming ornamentals:



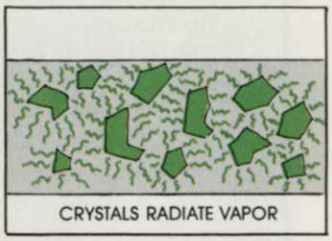
1. Dyclomec is a 2,6-dichlorobenzonitrile, commonly known as Dichlobenil. This unique herbicide goes directly to a vapor stage without going through a liquid stage. It is activated by temperature and soil moisture.



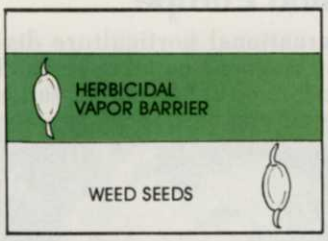
2. This remarkable herbicidal compound of razor-thin crystals is uniquely processed by PBI/Gordon to make a precise granule.



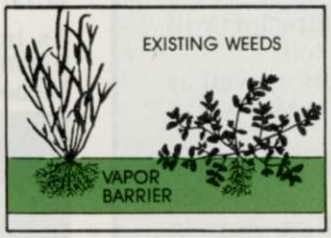
3. Granules are spread on soil surface. Moisture carries the Dyclomec crystals into the upper layer of soil. Because of adsorption by soil particles, lateral movement is minimal.



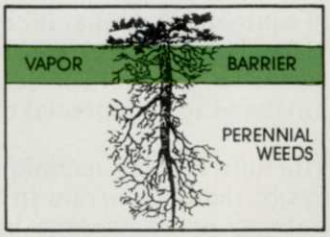
4. Temperature and soil moisture activate the Dyclomec crystals and they begin to radiate a herbicidal barrier. This continues for an entire growing season, and the spent crystals disappear, leaving no residue.



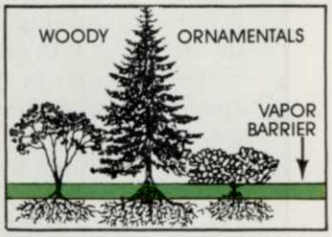
5. In this vapor barrier no plant cell division can occur. Seeds trying to germinate in the barrier will die. Sprouts below this zone will be killed as they try to penetrate the barrier.



6. Existing vegetation such as shallow-rooted grasses and annual weeds having root structures in this barrier will likewise be affected and die after two to three weeks.



7. Certain perennial weeds coming out of dormancy and attempting new growth within the Dyclomec barrier will run into the same dead end: they will be killed by the vapor.



8. Dyclomec, when used as directed, does not affect woody ornamentals, shrubs and trees that have deep roots extending well below the herbicidal vapor zone.

Now available in both 50 and 25 lb. bags.

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Dyclomec 50-lb. bag not available in Washington, Oregon, Idaho; Neither size is available in California.

Call Gordon's Technical Service Department

If you have any questions about where and how to use Dyclomec, we invite you to call us. Our technical people have a combined experience of 95 years in working with the Dyclomec chemical.

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Circle No. 141 on Reader Inquiry Card

UPDATE

Loss of large ficus high, Florida marl planting suspected

An unusually high mortality rate for large ficus trees has been reported by many interior landscape contractors during 1983, according to Dick Ott, chairman of the Associated Landscape Contractors of America's Interior Landscape Division.

Most contractors have reported that the loss shows up among large ficus that had originally been grown in the field in Florida and subsequently transplanted into large containers. The trees were then held by other Florida nurseries in acclimatizing houses and eventually sent to the contractors for installations.

Where losses have occurred, an unusually large percentage of the trees installed have been lost.

Growers in Florida are generally aware of the problem, as are the research people at the University of Florida, although there is no concensus among them as to just what is specifically the cause of this developing problem, or, for that matter, whether there is a single cause.

There is agreement on one thing, however; most of the dying trees have been grown in fields of Florida marl before they have been transplanted.

Estimating seminar planned for March in Houston, Dallas

A one-day bidding and estimating seminar for contractors will be on March 9 in Dallas and on March 10 in Houston.

The seminar is designed for general contractors as well as specialty contractors involved in commercial or public works projects.

Session topics will include bidding techniques to improve project cash flow, ways of reducing errors in the estimating process, the disadvantages of percentage billing, how to develop a good cost accounting system and effective ways to ensure accurate communication between office and in-field employees.

Preregistration is required and enrollment is limited to 60 people. Enrollment fee is $135. For more information on registration, contact The Idea Bank in Tempe, AZ, (602) 829-1233.

ALCA plans student field days

The Associated Landscape Contractors of America will sponsor its 8th Annual Student Field Days March 23-25 at Ohio State University's Agricultural Technical Institute in Wooster, OH.

The three day competitive event allows students from horticultural programs from colleges across the country to compete in events which directly relate to the skills necessary for a career in the horticulture industry.

Eighteen colleges are expected to participate in this year's event. For more information, contact Kent D. Hammond, ATI Dover Road, Rt. 250, Wooster, OH, 44691, (216) 264-3911.

CONVENTION *from page 12*

"Registration was much better than expected and it sure feels good," said Dr. Richard Duble, conference chairman and turfgrass specialist, Texas A&M.

Noted turf and industry specialists from Texas and across the country conducted seminars during the four-day show.

New officers elected to the association are: James Moore, superintendent, Ridgewood Country Club, Waco, TX, president; Gary McElvaney, Chemical and Turf Specialty, Dallas, TX, president-elect; Jerry Roberts, vice president, director of development, Laurel Land, Ft. Worth, TX, vice president.

Directors include: Region III - Louis Quick, Denton Country Club, Director of NTTA; Region IV - George Manuel, O.M. Scotts; Region V - Joe McMahon, Dallas Country Club; Region VII - R.W. Deems, Herlingen Country Club.

Next year's conference will be in San Antonio, TX.

INTERNATIONAL

Trade venture links U.S. and Europe

An international horticulture distribution company based in Holland has been formed by Shemin Nurseries

Emanuel Shemin

Inc. in a joint venture with the Weyerhauser Co.

Shemco International (CQ) B.V. has been formed to initiate horticultural trade between the United States and Europe and within Euro-

continued on page 20

WE'RE GROWING!

Building and maintaining a business on a profitable basis depends upon KNOWLEDGE and EXPERIENCE. PLCAA can give you that knowledge and experience. Grow with us!

PLCAA is the only national organization dedicated to serving the needs and interests of lawn care professionals.

Here are just some of the benefits available to you when you join PLCAA:

• **Annual Convention and Show**—The annual PLCAA Convention and Show keeps members abreast of the latest ideas, operating know-how, and industry developments. The national meeting encourages the exchange of new ideas and gives industry suppliers the opportunity to demonstrate products and equipment.

• **Newsletter**—To help members keep up with the latest ideas, trends, and activities of the association and industry, PLCAA publishes "Turf Talks". Included are articles covering current technical, management, economic, legislative and association news.

• **Awareness Program**—Developed to increase the visibility of PLCAA and your participation as a member, the program promotes professionalism and increases the confidence of the public in the integrity of the lawn care industry.

• **Property and Casualty Insurance**—A comprehensive business protection program that protects your company from the dangers of underinsurance and the waste of overinsurance.

• **Soon to be Offered: Major Medical and Group Life Insurance**—Programs designed to serve members with quality insurance at a competitive cost.

• **Technical Resource Manual**—This publication provides members with technical information vital to operating their businesses on a professional and agronomically sound basis.

• **Seminars**—Regional seminars are offered to members at a reduced registration fee. Sessions are aimed at providing agronomic and management information tailored to today's business climate and the lawn care profession.

• **Credit Association**—The Professional Lawn Care Credit Association is designed to meet the collection of delinquent account needs of members. The PLCCA is the only collection service sanctioned by PLCAA, and is open only to members.

• **Legislation Update**—A significant factor in today's business climate is the constant presence of proposed changes in local, state and national legislation and directives by regulatory agencies—changes that could seriously affect the successful operation of your lawn care company. Through PLCAA's Pesticide and Environmental Issues Alert Committee and the Pesticide Public Policy Foundation, Inc., you'll be kept informed of issues and legislation affecting the profession and industry.

Don't stand alone. Participating in your trade association's growth can save you valuable time and money. Invest now and be one of the top profitable businesses in the lawn care market. Grow with us.

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Circle No. 144 on Reader Inquiry Card

UPDATE

Reagan makes environment priority for election year

President Reagan, the consumate politician, is preparing to take a daring stance during his campaign this year in favor of environmental issues, according to administration officials.

His position is intended to counteract bad impressions made by James Watt at the Department of Interior and Anne Gorsuch Burford at the Environmental Protection Agency. But, it also pushes Reagan toward a confrontation with Big Business.

Meanwhile, both houses of Congress are actively considering environmental legislation, including amendments to FIFRA and the Toxic Substances Control Act. Since Congress was unable to produce this legislation in 1983, continued delay will be fought strongly by lobbyists.

Companies fear label nullification if Monsanto data decision stands

Drexel Chemical Company and Griffin Corporation fear they will lose registrations for current products if the U.S. Supreme Court rules in favor of Monsanto in its registration data suit against EPA and Stauffer Chemical Company.

Du Pont, the initial registrant of linuron, has notified Drexel and Griffin that it will seek to nullify their registrations of linuron products obtained with du Pont's data. At the same time, Zoecon has asked EPA to cancel registration of Sathon's dienochlar miticicde, saying Sathon failed to properly arbitrate for use of Zoecon's dienochlar data.

Drexel and Griffin have filed briefs with the Supreme Court in the Monsanto case, along with the Pesticide Producers Association and PPG Industries.

EPA says Monsanto traded data for right to hold registration

EPA has filed its brief in the Monsanto case with the Supreme Court stating Monsanto gave up its exclusive rights to glyphosate health and safety data in exchange for the priviledge of a registration.

EPA also defended its arbitration and compensation process in which an EPA arbitrator determines appropriate compensation for use of the data by others, subject to review by an EPA law judge.

EPA toxic waste inspectors want guns, fear for safety

Enforcing hazardous waste laws is dangerous business and EPA inspectors want the same rights as other law enforcement officials.

EPA inspectors have testified to a House committee they face threats daily from criminal elements in the toxic waste business. The committee is investigating why the Department of Justice has not deputized EPA inspectors as EPA had requested months before.

SHEMCO *from page 16*

pean countries. With headquarters based in Aalsmeer, Holland, Shemco's trade products will include interior foliage, flowering plants and cut flowers, exterior nursery plants and related horticultural supplies and accessories.

Emanuel Shemin, president of Shemin Nurseries, said, "We feel that major market expansion can occur by our becoming part of the European community and having international associates working together for mutual trade benefits."

Carl Johnson, left, President of Sensation, a division of Gilson Brothers Company, presents Sensation's first annual marketing leadership award to Howard Phelps, the firm's founder, recognizing his contributions to Sensation and the power equipment industry.

TURFGRASS

Portz to advise Illinois Turfgrass

Agronomist Herbert L. Portz has been reappointed adviser to the Illinois Turfgrass Foundation.

Portz has been professor of plant and soil science at Southern Illinois University-Carbondale for the past four years. He specializes in turf research and has developed methods for seeding difficult-to-grow zoysia grasses.

Since 1959, the Illinois Turfgrass Foundation has awarded more than $260,000 in turf research grants to various projects.

Subdue. The most effective fungicide against Pythium blight and damping-off.

Pythium weather. High temperatures, high humidity and high anxiety. Once Pythium takes root, it can destroy turf within hours.

Unless you take a grass-roots approach to Pythium. With Subdue.®

Subdue works both on contact and systemically.

Subdue fights Pythium blight and damping-off—as well as downy mildew (yellow tuft)—in two ways. On contact, Subdue destroys the fungi in the soil. Systemically, Subdue prevents disease from within grass plants. That's because Subdue is water soluble—easily absorbed by roots. So Pythium—and now, downy mildew—don't have a chance.

Subdue also controls costs.

Subdue's systemic action means longer, more effective residual protection. Fewer applications. Lower chemical costs. And savings in maintenance and labor. And Subdue's low application rate—1 to 2 fluid oz. per 1,000 sq. ft. for 10 to 21 days on established turf—makes Subdue the most cost-efficient protection you can buy.

Before Pythium weather strikes, subdue it. Use Subdue in a preventive maintenance control program. And get a good night's sleep.

Ciba-Geigy, Ag Division, Box 18300, Greensboro, NC 27419.

CIBA–GEIGY

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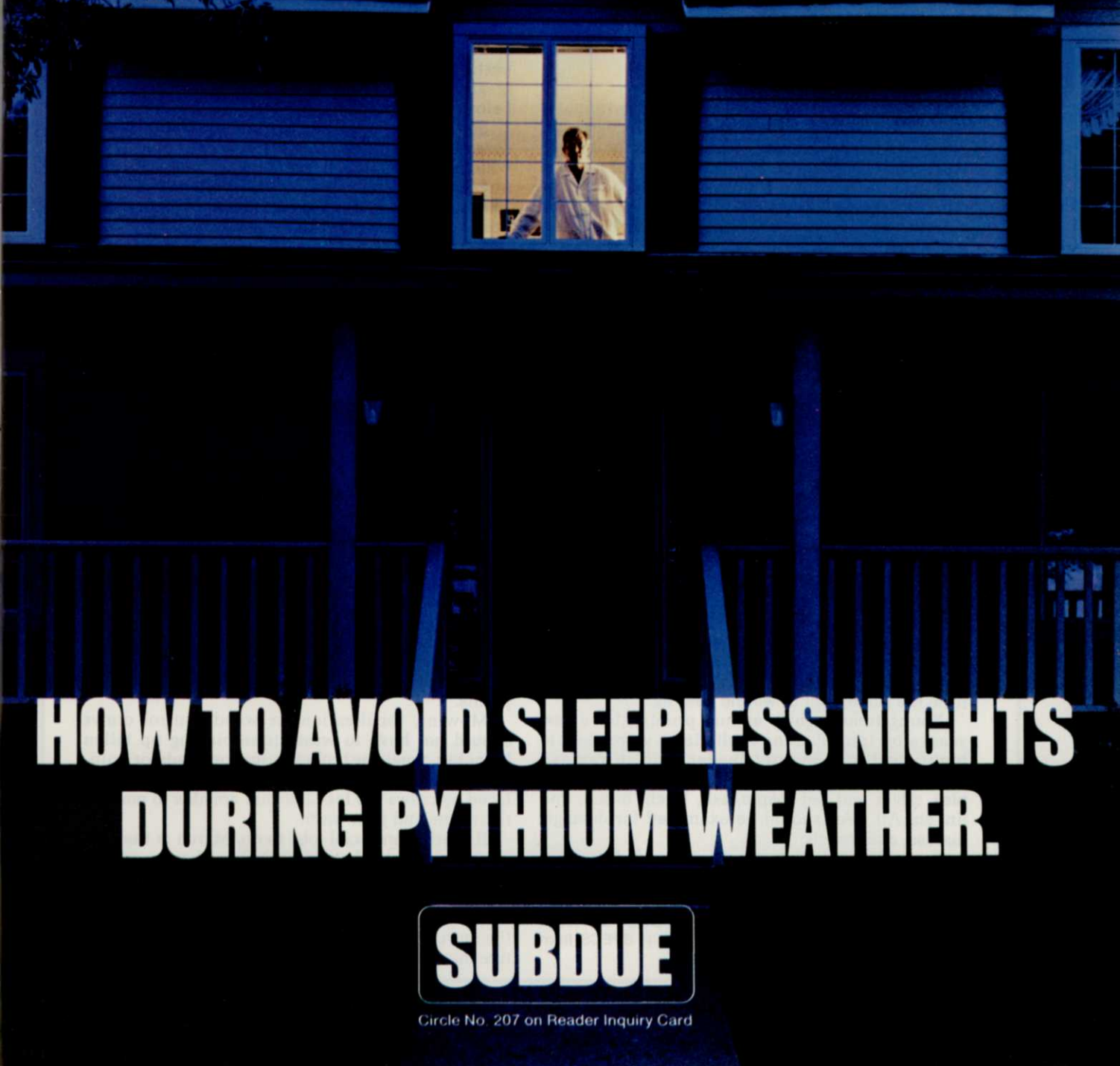

HOW TO AVOID SLEEPLESS NIGHTS DURING PYTHIUM WEATHER.

SUBDUE

Circle No. 207 on Reader Inquiry Card

March efforts save time, profits later

March is your best chance to save time during the busy season. The work you do in March is largely preventative and can greatly reduce surprises later in the season, for both you and your customers.

Preventative work includes application of preemergence herbicides for crabgrass control; dormant oil spraying of trees and shrubs for control of aphids, scales and mites; tree and shrub fertilization, and pruning.

Of course, all work is dependent on labor and scheduling. If you employ seasonal laborers, you might consider bringing them back one month prior to the busy season for retraining and to perform preventative landscape maintenance.

Pruning and fertilization can be done later, but March is optimum timing. Doing it in March lightens your load during the busy season.

Crabgrass control

Technically, crabgrass seed in the soil germinates when the soil temperature averages 55 degrees F. Since few companies have the ability to monitor soil temperature for all areas they serve, the best solution is to concentrate on a six- to eight-week window where crabgrass has historically germinated in your area. Another common indicator of crabgrass germination is forsythia bloom.

The two-month period for preemergence herbicide application ranges from the beginning of March in Texas and Florida to the beginning of May in Ontario. Mid-April is the time cited most by turf weed specialists in the transition zone.

Two applications may be necessary to effectively control crabgrass germination for the entire period. Preemergence crabgrass herbicides include Balan, Betasan, Dacthal, Ronstar, and Tupersan. They should be used on established turf with the exception of Tupersan.

Do not disturb the soil surface during the two-month period since this greatly reduces the effectiveness of preemergence herbicides. Aerification, thatch removal, and verticutting should be done at another time, preferrably the fall.

Pruning out damage

Ice and wind of winter inevitably cause branch breakage. March is a good time to inspect and prune trees before they leaf out and conceal winter damage, galls, and insects. It is also an optimum time from the standpoint of wound healing.

Young trees require annual pruning for a few years after transplanting to eliminate v-crotches, to highlight the dominant leader, and to remove suckers. Trees requiring extra attention are crabapples, silver and red maple, ash, birch, beech, and linden. All trees should be examined for damage, disease, and insects.

Overgrown shrubs can be reshaped before rapid growth commences. In fact, the dimensions originally intended for a landscape can be restored at this time. Access to shrubs may be easier prior to emergence of bulbs and perennial flowers.

You may want to delay pruning of some spring flowering shrubs since buds are already formed. These include forsythia, lilac, weigela, spirea, bushy dogwoods, potentilla, and mock orange. Flowering shrubs which can be pruned without losing buds are Rose of Sharon and viburnum.

Dormant oil sprays

If you keep good records you are aware of areas or accounts with sucking insect problems, such as aphids, many scales, and mites. Linden, ash, and crabapple may require annual attention.

March is one of the best times to control these pests without using more toxic materials. It also greatly reduces the breeding population of the pests before they reproduce.

Some plants are sensitive to oil and should not be sprayed. These are primarily thin-barked trees which include birch, beech, hickory and walnut.

Prune first, then apply superior oils in the 80- to 100-second category. This is also done before leaf break. Spray to the point of runoff.

Tree and shrub fertilization

Studies have shown trees and shrubs benefit most from fertilizer applied prior to spring growth. Fertilization is critical for trees that suffered from disease and insect attack the previous year, plants in raised beds or containers, and plants which serve a key role in the landscape plan and can not be easily replaced. As a preventative measure, set up a two- or three-year fertilization cycle for all important trees and shrubs.

The majority of tree roots are in the top 12- to 18-inches of soil. Nitrogen applied to the surface can leach down to the roots. Potassium, phosphorus and minor elements will not leach down from the surface and have to be placed within the root zone for the tree to utilize them. Once they are in this root zone area, however, they do not leach out and last much longer than nitrogen, possibly years.

Other March ideas

Efficiency is a primary source of profit today. Surprises which lower efficiency by increasing costs rob profits.

Mowing, fertilization, or weed control crews should not have to waste time picking up fallen branches, repairing broken irrigation heads, or pruning out tree and shrub damage. The more disruptions faced by crews the less able you are able to manage their time and your profit.

If there are special jobs to do, March is the best time to rent special equipment also. Chances are the equipment will be available, recently overhauled, and possibly cheaper than during peak season.

The more prepared you are for the busy season, the more efficient you'll be. Planning and preventative maintenance put you ahead of others. **WT&T**

Landscape Log is written based on previous publications by Dow Gardens Horticulturist Douglas Chapman, the Weed Control Guide from March 1983, and TECH SPECS from August 1983.

Sometimes, your problems just get bigger. Luckily, so do our solutions.

If you have a need for a big utility tractor to handle tougher than normal jobs, we have two suggestions: the new John Deere 1450 and 1650 Diesel Tractors. These tractors are made for jobs that few other tractors in their price range can match.

Both have tough direct-injection 4-cylinder diesel engines—50 PTO hp in the 1450 and 60 PTO hp in the 1650 (55 and 67 engine horsepower).

On each tractor you'll find a collar-shift transmission with 9 forward and 2 reverse speeds. Planetary final drives. And a rear-axle mechanical differential lock.

Hydraulic wet-disk brakes are also standard, with a separate parking brake for added convenience and safety.

The operator's station is well designed, too. You'll find a large, roomy platform. A comfortable suspension seat. Plus a quiet engine to make work more pleasant.

And both the 1450 and 1650 are available with optional mechanical front-wheel drive, factory-installed. Along with John Deere's reputation for quality and dependable dealer service.

For the name of the nearest dealer, or a free folder on the John Deere 1450 and 1650 Utility Tractors, call 800-447-9126 toll free (800-322-6796 in Illinois) or write John Deere, Dept. 67, Moline, Illinois 61265.

New John Deere 1450 and 1650 Tractors. Proof that bigger sometimes really is better.

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Circle No. 111 on Reader Inquiry Card

AZALEAS: Undiscovered Color for Northern Gardens

by Douglas J. Chapman, horticulturist-administrator, The Dow Gardens, Midland, MI.

Deciduous rhododendrons, or azaleas, are the backbone of early spring color in the South. Their vibrant reds, scarlets, and oranges make spring gardens worth a second and third look.

Unfortunately, azaleas are not used nearly enough north of Central Ohio. Some of the most colorful azaleas are perfectly hardy to 25 degrees below zero.

Northern landscape managers can have color in a landscape from mid-April to mid-June by taking advantage of hardy azaleas, including Korean, Royal, Pinkshell, Exbury (Knap Hill), and Kaempfer.

The hardy azaleas

Korean rhododendron (*Rhododendron mucronulatum*) is extremely useful in naturalized settings as an understory plant or in partial sun. This deciduous rhododendron reaches four- to eight-feet in height. It is the first rhododendron in the North Central U.S. to flower during spring (mid-April). This selection has numerous clear pink delicate flowers and an upright oval growth habit. The one cultivar readily available is 'Cornell Pink'.

Korean rhododendron is relatively maintenance-free, although it can have problems with root rot, twig blight, and leaf scorch in full sun.

Pinkshell azalea's *foliage [above], turns from lime-green to red in the fall.*

The new 100sx from Ditch Witch...

Priced Lower Than Any Other Compact Plow!

1 LOWEST PRICE. The 100sx is the lowest-priced small plow on the market. It can match or exceed the production of any machine in its class. And it's built by Ditch Witch – pioneers in vibratory plowing for over 20 years.

2 COMPACT. At 24 inches wide, 40 inches high, the 100sx can work in confined areas where bigger equipment can't go. One man can load and unload it. And it can be transported by trailer or in a small truck or van.

3 HYDROSTATIC GROUND DRIVE. Hydrostatic ground drive makes the 100sx easy to operate. One lever controls direction and speed. Infinitely variable ground speed from zero to 140 fpm gives you the speed you need, adjusting smoothly without shifting. Hydrostatic ground drive and rubber tires mean better traction, less turf damage.

4 BLADES. Bury cable with 6, 8, 10 and 12 inches cover using one blade, which is easily installed and removed with two knock-out pins. Two blade positions vary the blade angle to fit work conditions. The feed blade's removable chute back makes it easy to put in cable – no threading – and allows easy cleaning of the chute. It also allows cable to be removed without being cut. A pull blade is available for installing plastic pipe and other materials.

5 PRODUCTIVITY. Size, vibrating mechanism, blade design, hydrostatic ground drive and controls make the 100sx the most cost-efficient drop plow you can buy. An optional reel carrier makes the job even easier.

6 GET PARTS, SERVICE FAST. Because the 100sx carries the name Ditch Witch, it's backed by the industry's largest and best parts and service organization. That means you get parts faster, with trained service specialists who are ready to serve you in the shop or in the field.

Ditch Witch built the 10-HP-class 100sx with the features you said you need in a compact drop plow. It costs less to buy, less to operate and is backed by the Ditch Witch dealer organization. It's the best value anywhere in a compact drop plow. The Charles Machine Works, Inc. P.O. Box 66, Perry, Oklahoma 73077, (405) 336-4402. ®

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Worth more, every day

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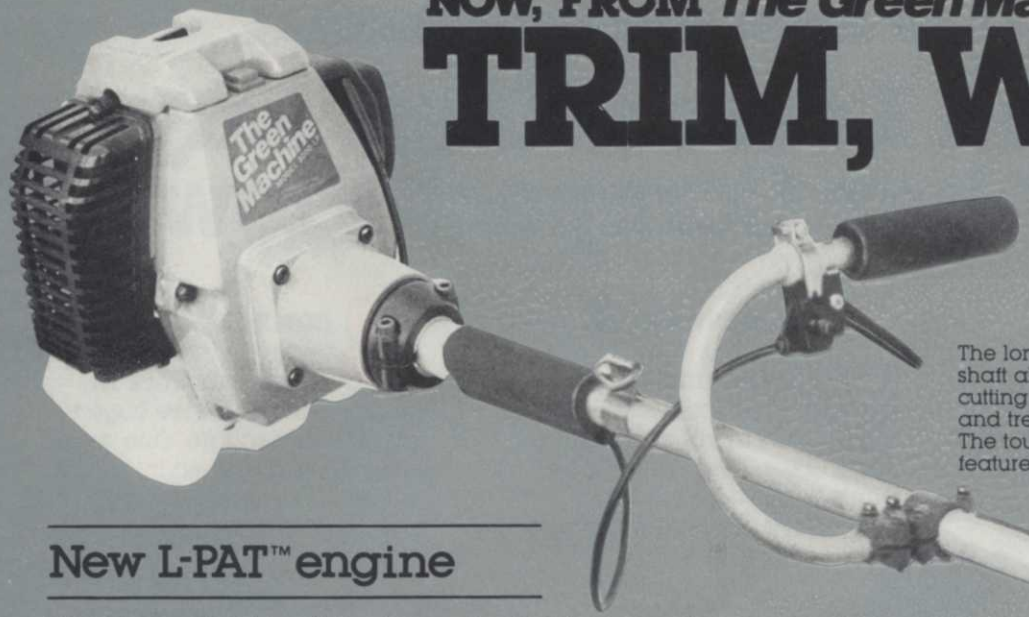
NOW, FROM *The Green Machine*®

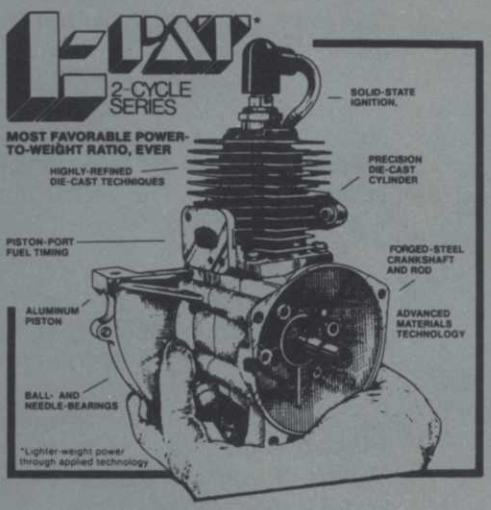
TRIM, WEED.



The long, 59-inch straight shaft allows side-action cutting with metal brush and tree-pruning blades. The tough bevel-gear drive features 1.26/1 reduction.

New L-PAT™ engine

The Green Machine introduces the first large-scale advance in some 20 years of two-cycle development – the L-PAT™ series, incorporating the advances that have taken place in metallurgy, in casting techniques, in computer-assisted design of combustion chambers, in electronics and the perfection of the solid- state ignition, in the use of non- metallic materials. The result: a 1.40 hp, 25.4 cc power package with the most favorable power- to-weight ratio, ever. L-PAT™ – lightweight power through applied technology.



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True power tilling action removes weeds while conditioning the soil – allowing air, water and fertilizers to penetrate. Reciprocating spring-steel blades dig down into the soil at over 2000 cycles per min. Won't skate or dance to the side. Self-cleaning, non-clogging blade action. Rugged gear-drive and heavy-duty construction throughout.

The performance of this light-but-powerful new tool has to be experienced first-hand to be fully appreci-

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Now you can purchase the industry's finest string-trimmer, brush cutter – plus the sensational new weeder-cultivator attachment at a special introductory price. Contact nearest distributor for name of your participating dealer.

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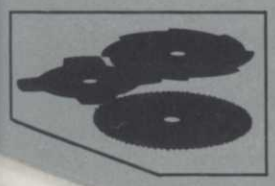

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Pinkshell Azalea (*R. vaseyi*) flowers early in mid-May. This upright, somewhat irregular, shrub reaches five- to nine-feet in height. The flowers range from a clear to dull pink. The foliage is lime-green throughout the summer months while developing good red fall color. This azalea grows well near ponds or bodies of water but needs well-drained, high organic soils.

Exbury and Knap Hill Azaleas are becoming more available in the trade. They flourish in medium shade to full sun. They have a somewhat upright-oval habit, reaching six- to eight-feet in height.

Although botanically the same type of cross as Exbury, Knap Hill is usually pink and white while Exbury ranges from a brilliant red and orange to bright yellow and cream color.

Korean Azalea (*R. poukhanense*) is another late flowering, small azalea. It is perfectly hardy with an upright-irregular habit, reaching five- to six-feet in height and width.

These hardy azaleas can tolerate more sun than our native catawbiense rhododendrons.

It thrives under mid- to full sun conditions with magenta flowers in late May. The foliage is dark green during summer, becoming orange to red during the fall.

Kaempfer Azalea (*R. kaempferi*) blooms during early June. This somewhat upright-irregular-shaped shrub reaches five- to seven-feet in height. It thrives in sunny to partially shady locations. The orange-salmon to red flowers are vibrant when most azaleas have finished blooming.

Generally speaking, these azaleas are low-temperature hardy, tolerate more sun than our native catawbiense, or rhododendron cultivars, have more vibrant colors, and require little or no maintenance.

They can be grown as a specimen or in mass plantings at the fringe or border for a woodsy or naturalized look. They thrive when planted in well-drained, high organic soils, and as companions to deep-rooted trees, such as oak, hickory, and pine.

These shrubby deciduous rhododendrons add a sparkle of color which seems to bring many woodland landscapes alive while requiring little or no maintenance. Further, they have few insect and disease problems.

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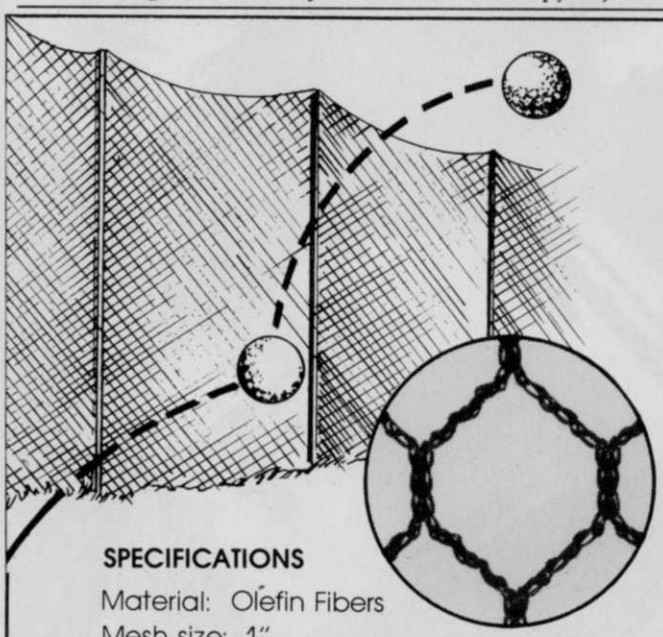

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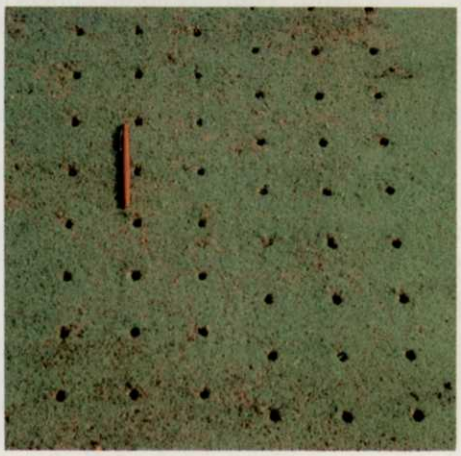
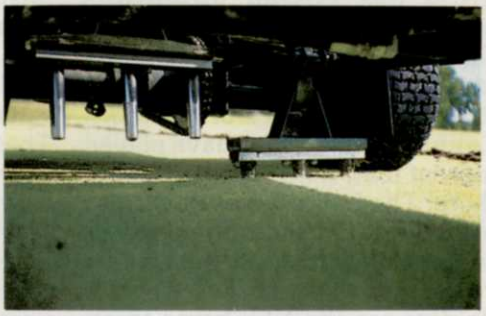


decreases surface runoff and irrigation frequency. It also breaks up thatch and compaction and brings up soil particles to reinoculate thatch with soil and microbes to enhance thatch decomposition. The Ride-Aire breaths new life into thick lawns and helps prevent the "5-year slump" in turf quality that causes customer dissatisfaction and turn-over. Whether regular turf maintenance or renovation, the new Ride-Aire adds a new dimension to the lawn care service industry.



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Circle No. 149 on Reader Inquiry Card

The Biggest Race of All

L.A. Coliseum turf team races against clock to solve turf problems at 1984 Olympics site.

by **Stephen T. Cockerham,** consulting agronomist

The year 1984 is going to be a big year for the grand old lady, the Los Angeles Coliseum.

Built for the 1932 Summer Olympics, 52 years later, she will play hostess to the Summer Olympics this year.

Over the last 60 years, the stadium has hosted numerous events. The Billy Graham Crusade brought in one of the largest crowds back in the '60s.The University of Southern California and UCLA have played most of their home football games there. The Los Angeles Rams also played most of their home games at the Coliseum until just a few years ago. Now the Los Angeles Raiders are the NFL home team.

There have been rock concerts, motocross, soccer, track and field, movies, TV shows, TV commercials, and political rallies. Its uses have been many and varied for the City of Los Angeles over the years.

Stephen T. Cockerham is in Ag Operations for the University of California at Riverside.

Getting ready

Refurbishing in several areas was necessary for an Olympic-caliber facility. A new and slightly relocated track was installed as well as a new television screen-type scoreboard, and a new field. And with that new field, the agronomists were called in.

In 1981, the decision-makers decided on the type of playing field to be built. They went with a state-of-the-art sand basin field. These are usually an excavated site with a network of drain lines, filled with a uniform medium sand. The turf is sodded, often with the soil washed off of the roots. And presto - there is an uncrowned, flat sports field with super drainage.

There are several companies which install the sand basin fields. The Coliseum contracted with Hy-Play Systems Inc., Aurora, OR.

There are two factors in construction which differentiate this system from the others. First, there is no poly liner to the basin and, second, the excavation is not filled with uniform medium sand.

Whether to use poly liners is not a particularly controversial subject. However, the growing medium used is more widely discussed.

Growing grass

The Coliseum field has the drain lines (plus several miles of TV cables) which are covered with coarse gravel, then a layer of finer material, and successive layers until the top, about seven inches, is a sand. There is some concern over the layering and the effects of perched water tables, however, not everyone believes that to be a problem. Whether it is a problem or not, it certainly is not going to be changed, so the job at hand is to grow grass on what is there.

With the installation of Santa Ana Hybrid bermuda, in the Spring of 1982, the field was complete. During the fall and winter, the traffic was heavy, but, due to the NFL Players strike, not as intense as normal. The turf was overseeded with PhD perennial ryegrass blend in the fall. Some

overseeding was done in the wear areas. In the Spring of 1983, the new USFL franchise, Los Angeles Express, began playing. In the past, this period had been used for maintenance.

By May, the Coliseum management had become quite concerned. The bermuda was not emerging through the ryegrass. General Manager Jim Hardy, Assistant General Manager Jerry Nielsen, and Supervisor Bob Williams started looking for help. Dr. Jim Watson, vice president of the Toro Company and well known turf authority, was the man that was suggested. After looking at the field, Watson suggested that a local consultant be retained. This would permit frequent observations of the surface.

Bermuda loss

The problem was that as much as 80 percent of the bermuda had been lost over the winter. The roots of the remaining bermuda were nearly gone and the ryegrass roots weren't in much better shape. In all fairness, the field still looked better than most, but it was ryegrass, not the desired hybrid bermuda, and that was not the way it was supposed to be.

Soil samples were taken as well as samples of about every thing else. Then a team of experts was put together. Because of the importance of the field to the Olympics, there was a feeling of urgency by all participants. The team consisted of William Davis, turf specialist, Dr. Robert Endo, plant pathologist, Dr. Victor Gibeault, turf specialist, Jewell Meyer, irrigation specialist, John Van Dam, farm advisor, and Dr. Victor Youngner, professor of turfgrass and creator of Santa Ana Hybrid Bermuda--all from the University of California. Also participating were Dr. Watson and myself, the local consultant.

Keeping in mind that growing high traffic turf on pure sand media is a relatively new thing, the team went back to the fundamentals of growing turf. The nutrition analyses were brought up to levels that were considered appropriate. Bioassays were run with no solid conclusions.

The irrigation system and program were evaluated and both were found to be satisfactory. Meetings and discussions were held where the situation and data were debated. What was concluded was that Bob Williams and his crew really weren't doing anything wrong. However, something was definitely wrong.

Meanwhile new stolons were drilled into the existing turf. As time permitted, the center of the field was resodded--after all the Raiders and USC were going to play in the fall. Through the summer there was a track meet, several international soccer games, a movie, several dozen commercials, and USFL football.

Success story

The stolon job was pretty successful as was the sod installation. By fall, the field was more than 85 percent bermuda and looked gorgeous. TV announcers, newspaper writers, and football players complimented the Coliseum management on the condition of the field.It really was a sucess story.

However, the tale doesn't end there. Something is still wrong. Although the turf looks good and plays just fine, the roots don't seem to be as healthy as they should be. No one wants the same thing to happen as happened last year. Unfortunately, the question as to what did happen still is not answered. The turf team is still meeting and samples are still being analyzed.

Is it a pathogen, a toxic substance, a deficiency? One thing is pretty sure, management practices have been eliminated as being the culprit.

The Olympics are coming on fast. The field will be under the world's microscope. Many suggestions have been put forward from various sources. However, nothing can compare to the heartfelt emotion brought on by the verdant perfection of an emerald turf. Can you imagine what the hammer throw would do to an artificial surface. They would probably have to use a "claw" hammer to keep it on the field.

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Circle No. 108 on Reader Inquiry Card

Sewage Compost Use Suffers Information Gap

by Bruce F. Shank, executive editor

Turf managers are beginning to experience pressure from salesmen of various forms of sewage sludge for turf before information on its use is generally available. Weeds Trees & Turf *interviewed a number of agronomists and suppliers to gain basic information on the various forms of sewage sludge for users. A detailed guide on use of these products by the primary researcher in the field, Dr. Jack Murray of the USDA, will appear in the next six months.*

Manure spreader *adapted for compost.*

A cloud of doubt hangs over use of sewage biproducts for turf. Ironically, manure was the first fertilizer for turf in both establishment and in maintenance as a topdressing.

Milorganite, a processed sewage sludge, has been sold and used in turf since the 1920's. The breweries and tanneries, whose waste makes Milorganite exceptionally high in nitrogen, and a high-temperature granulation process allow the Milwaukee Sewerage Commission to keep volumes down and shipping practical, according to Jim Latham, director of marketing.

Even so, the Commission was forced to add a warning on its bags that Milorganite may contain high concentrations of certain metals which may accumulate in edible products.

Check sludge source

This warning may exemplify the basic doubt about sludge products. "Source is definitely a limiting factor," claims agronomist Richard Schmidt of Virginia Polytechnic Institute and State University, Blacksburg. Schmidt has conducted studies using sewage sludge in establishment of sod. "Heavy metals from industrial wastes could have a detrimental effect on turf growth," says Schmidt.

An article in the September 15, 1983 issue of the American Nurseryman by Robert H. Dowdy, with USDA in St. Paul, MN, states, "Application on any site, whether for food or non-food crops, will probably be limited by an inevitable metal buildup, although the long-term effects of trace metals on soil are not yet clear." Metals raise the cation exchange capacity of the soil and also raise the pH. Higher pH soils, however, do not accumulate metals as fast says Dowdy. "Sludge must be analyzed regularly," Dowdy insists.

Jack Murray of USDA's Research Lab in Beltsville, MD, is very bullish on the use of sludge and compost in turf. "States are looking at the turf market as a non-food crop user of sewage sludge," Murray revealed. "The Environmental Protection Agency and most health departments have verified the sterility of compost after proper processing."

"Our work has shown compost, when applied at the correct time, reduces turf disease, improves the soil, and provides excellent long-term turf nutrition," states Murray. He and a team of scientists have produced a number of major reports on use of sewage sludge compost for soil improvement and plant growth.

"Compost can replace topsoil in preparing a seedbed, be used as a topdressing with overseeding, or serve as a slow-release fertilizer," Murray states.

"Its best use is as a soil amendment. Compared to topsoil, it is lighter, easier to spread, weed-free, and contributes more to the soil." Murray recommends a one-third compost to two-thirds soil mix for seedbed preparation.

Even distribution

"Compost's biggest problem right now is the lack of a device to spread the compost evenly in the volumes required," Murray points out.

Grove Teates, Jr., a consultant to municipalities for composting, believes he has licked the spreading problem with an adapted manure spreader. Teates has used Royer and Lindig shredders to reduce the size of the compost chips for application to turf. "Texture and moisture content greatly influence spreadability of compost," Teates said.

Cities are competition

Teates produces and sells ComPro compost mixes for turf, vegetable production, potting mixes, and land restoration. DelChem of Philadelphia, PA, and Emerald Isle, Ltd., of Ann Arbor, MI, also produce a line of compost products. Their competition in the future may be more municipalities than each other.

Teates consults the cities of Anapolis, MD, and Columbus, OH, in marketing compost. "More and more cities are starting compost operations," he says. "It's starting to get competitive. City administrators are in charge and see a way to generate revenue from compost while greatly reducing sludge disposal costs. A

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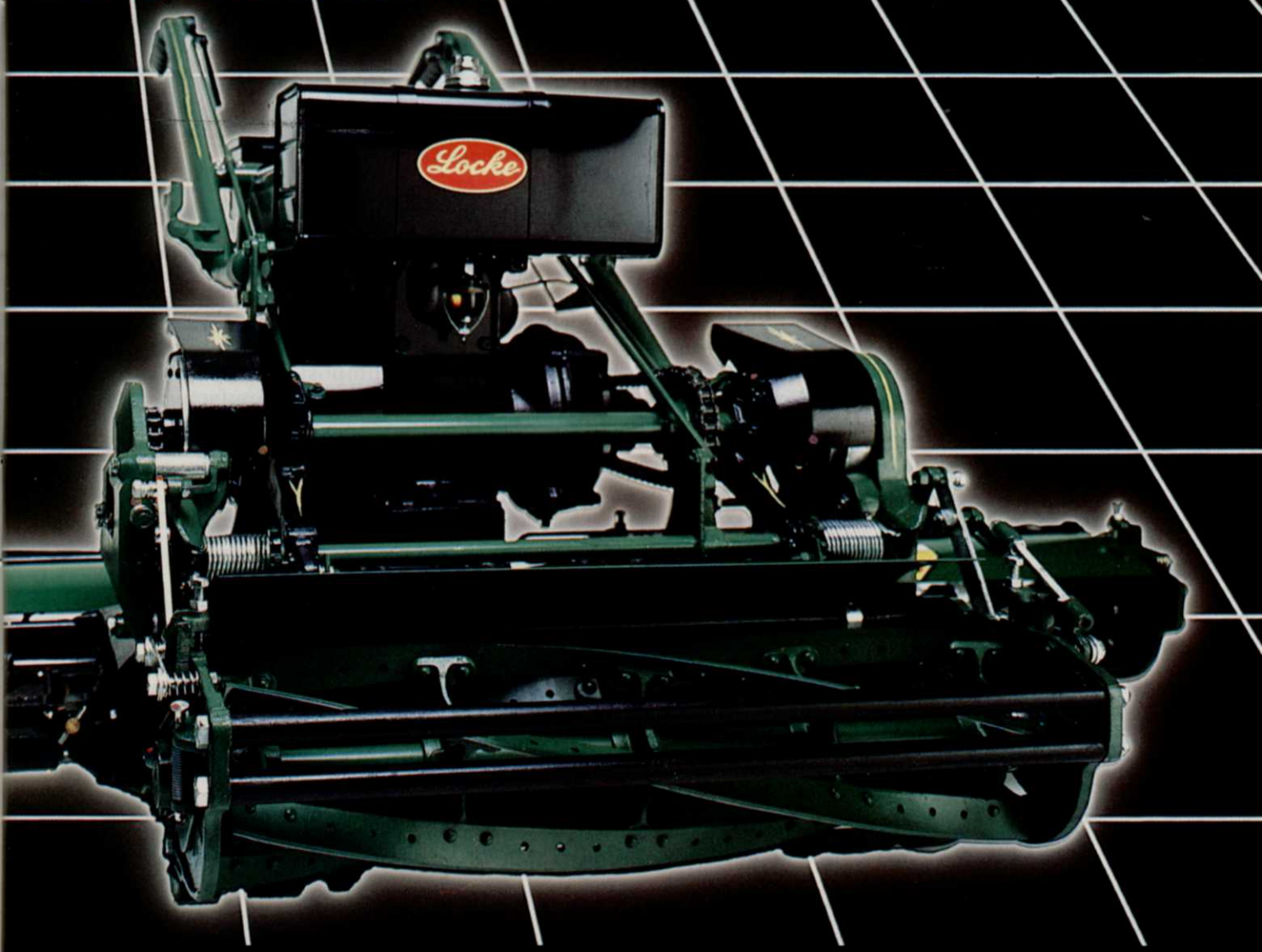

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price war may be brewing. Some cities give the compost away."

Assuring sterility

Schmidt is concerned about proper composting. "You must rely on the processor of the compost for eliminating any unhealthy organisms in the product," Schmidt remarks. "The composting process must be carefully performed for temperatures to reach levels high enough to kill harmful organisms. Information on composting is available from USDA and the extension service."

Wood chips *are mixed with sludge for composting, then removed for spreading.*

Volume is obstacle

"But, the biggest problem with compost is the volume required to obtain sufficient nitrogen and the cost of shipping this large volume long distances," Schmidt says. Since nitrogen levels are less than five percent, tons per acre of compost are required.

Murray and associates reported 1,000 lbs. per 1,000 square feet, or nearly 25 tons per acre, would be needed to serve as a turf fertilizer. This would be a one-half-inch layer on the surface which should be verticut or aerified into the soil. Furthermore, the sludge would have to be applied twice per year to equal rates of standard turf fertilizers.

Volumes for soil incorporation would be four to six times greater. "Compost is much lighter and easier to handle than topsoil," Murray defends. "You don't have a guarantee topsoil is weed-free. After grinding up an asphalt parking lot, we've mixed compost with the asphalt and subsoil and achieved a good stand of grass."

"Long-distance shipping of compost is impractical," says Schmidt. Manufacturers are trying to solve this problem by fortifying compost and sludge products with additional nitrogen. Milorganite is a perfect example of changing the formula-

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tion to increase the practicality of shipping.

Municipal and commercial compost operations are growing. Federal, state, and local funding for environmentally-sound disposal of sewage sludge is available.

Private composting operations are not out of the question. A golf course or sod farm near a residential development could develop a private compost operation.

Layering possible

Surface application of compost to sand or soils with little organic content will cause layering. Some type of incorporation to mix the compost with the top two- to four-inches of soil is needed to encourage deep rooting, improve drainage, and provide a water reserve for drought periods.

The benefits of organic matter content in growing media are well known. Organic matter serves as a buffer to reduce chemical burn. It serves as catalyst for important chemical reactions (cation exchange capacity) and it improves soil texture for better water and air movement. The problem is these benefits are only provided if the material is incorporated into the existing soil.

One example of layering is muck sod placed over clay, and the resulting summer stress and disease problems.

Only ten to twelve percent of the nitrogen in sewage sludge is released within the first 60 days, Murray states. Even so, applying the amount of sludge required to feed turf for a full year would create an initial period of lush growth. To counteract this, Murray recommends two applications per year at half rate, year after year.

"Compost is very effective during establishment and overseeding," Murray claims. "With large seed, such as tall fescue or perennial ryegrass, the compost can be placed over the seed. With small Kentucky bluegrass seed the compost should be put down first."

Education needed

The problem is not the heavy metals or layering as much as it is marketing of sewage sludge products is ahead of educating the user.

The government is encouraging states to set up composting operations as private businesses are building the market with their compost mixes. The user is being sold product before he understands its proper use. That is unfortunate, because the underlying sense of putting a waste product to constructive use is great.

Sludge products and composts can play an important role in the turf market if better information on use was available. Jack Murray is making this one of his priorities for 1984. When he completes his guide to compost use, you will be able to read it in *Weeds Trees & Turf*. **WT&T**

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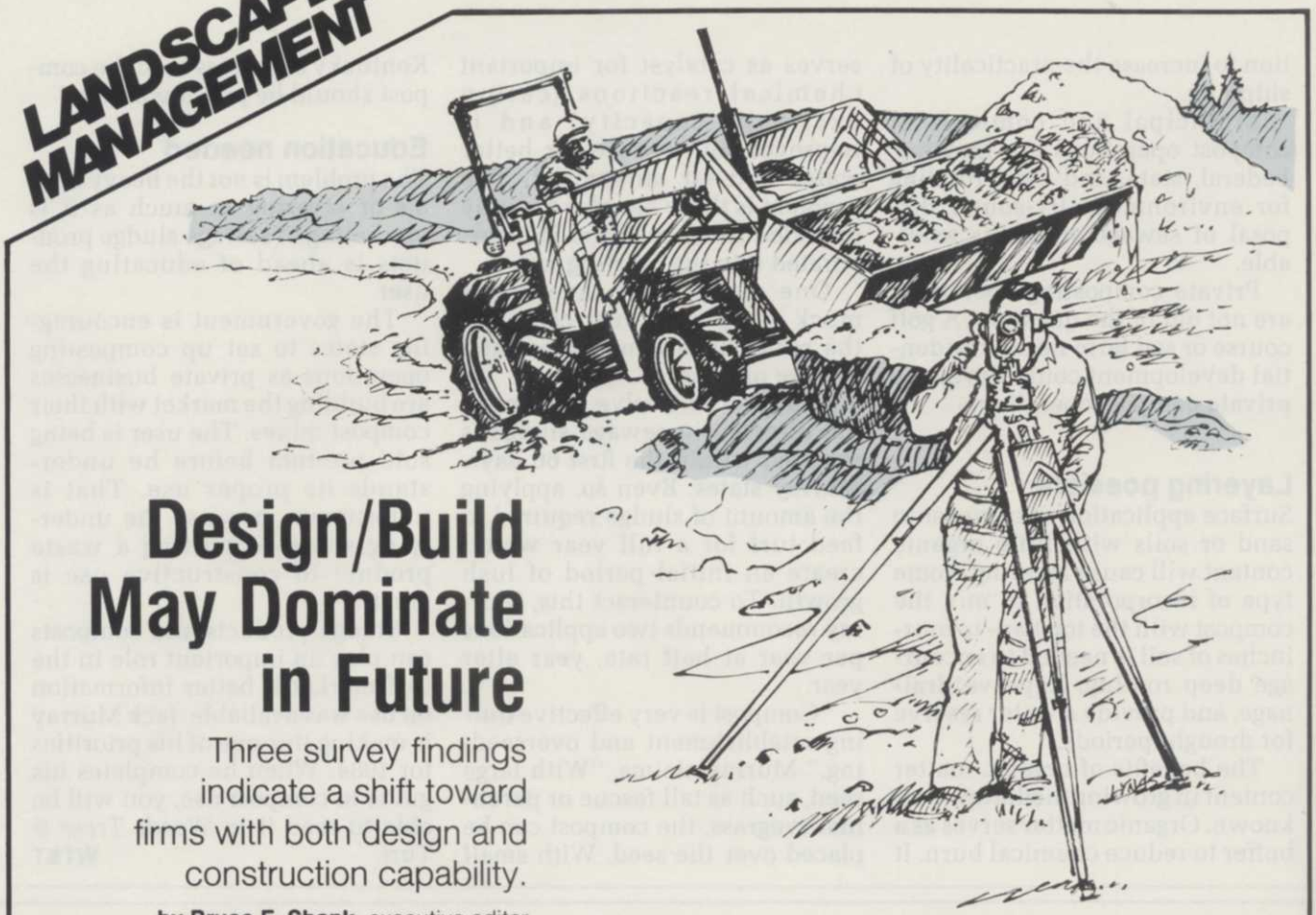
load with it, even smooth a road with it.

LANDSCAPE MANAGEMENT



Design/Build May Dominate in Future

Three survey findings indicate a shift toward firms with both design and construction capability.

by Bruce F. Shank, executive editor

In the future more than half the landscape construction work in the U.S. may be done by design/build companies, according to the latest *Weeds Trees & Turf* industry survey.

This prediction is based on three findings. First, more than 60 percent of landscape architects polled are in favor of the design/build concept. Second, commercial/industrial work is considered the most recession-proof and preferred part of construction by both architects and contractors. Small contractors, who have done designs for residential work, are improving their design capabilities to reach the commercial/industrial market. Third, architects desire greater control over both construction and maintenance of their designs.

Surprisingly, the contractors surveyed are decreasing the amount of maintenance work they do for more construction and design work. Increased competition in maintenance may be part of the reason. The contractors recognize the excellent potential of maintenance services but they have actually moved away from maintenance, according to the dollar volume of work they do in design, construction, and maintenance.

Architects are already heavily involved in the commercial/industrial sector. They prefer working as a consultant to the property owner over working for the general contractor or a subcontractor (that would include landscape contractors). More than two-thirds offer follow-up inspection and maintenance guidelines for an additional fee. Working with the contractor before, during, and after installation is their only way to assure their design is carried out as intended.

It was evident from the survey results that nearly a third of the architects want to stay away from the construction end of the business and concentrate on consulting governmental agencies in land use and other large institutions. They don't want the hassle of scheduling work crews, financing materials, and dealing with Mother Nature first hand. These are much the same reasons why building architects resist construction management.

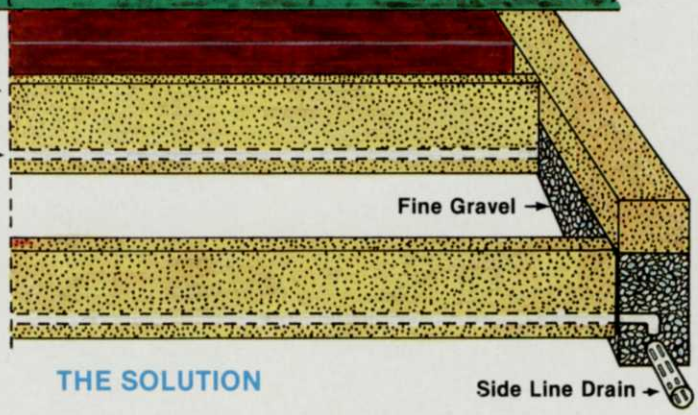
The need for contractor and architect to work together is agreed. Yet it seems that contractors and architects are far apart in certain beliefs, particularly education. While landscape architects are strongly in favor of licensing, which requires a degree, more than two-thirds of the landscape contractors surveyed do not look for a college degree when hiring their foremen or middle managers.

The attitude of learning the business from the ground up is firmly entrenched in the minds of contractors. They are willing to pay young managers $12,000 to $18,000 if they have solid on-the-job experience.

Contractors recognize the

The Cambridge drainage system makes the difference

THE PROBLEM



The concept of the Cambridge system is to promote maximum drainage through the efficient use of narrow sand injected bands across greens and sports turfs.

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- Are being successfully used on most horse racing tracks in England, including Ascot.
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- Results are guaranteed.

A video tape explaining the Cambridge process is available on loan upon request.

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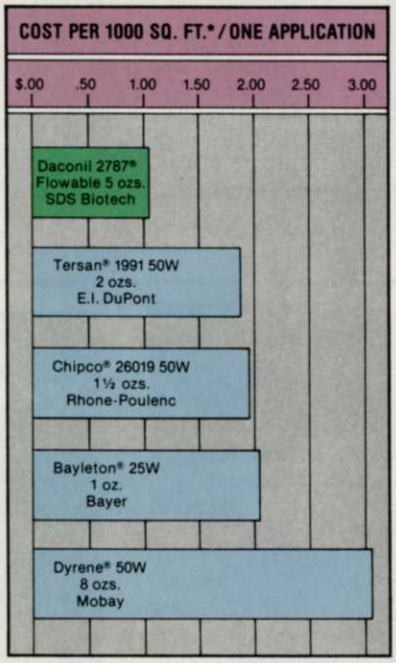
Using a typical tee and green spray schedule, Daconil 2787 gives you greater savings on a per 1000 sq. ft. basis when it comes to delivering superior control of your most serious diseases—dollar spot (including benomyl-resistant dollar spot), Helminthosporium (leafspot and melting-out) and large brown patch.

In fact, Daconil 2787 has a proven record of providing the most effective control of 10 major turf diseases.

And here are more reasons why it pays to use Daconil 2787. There's no need to add a costly spreader/sticker. Daconil 2787 already has it built in to assure you of full and even coverage for maximum disease protection.

Daconil 2787 resists wash-off. Which means it keeps on working during heavy rains or watering.



*Costs based on manufacturer suggested retail unit price as of January, 1984.

What's more, in over 15 years of continuous use, there has never been a documented case of resistance with Daconil 2787. Even on courses where it was applied at weekly intervals over many years.

The facts are there. The proof is plain to see. Daconil 2787 gives you both effective and economical disease control.

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Flowable Fungicide

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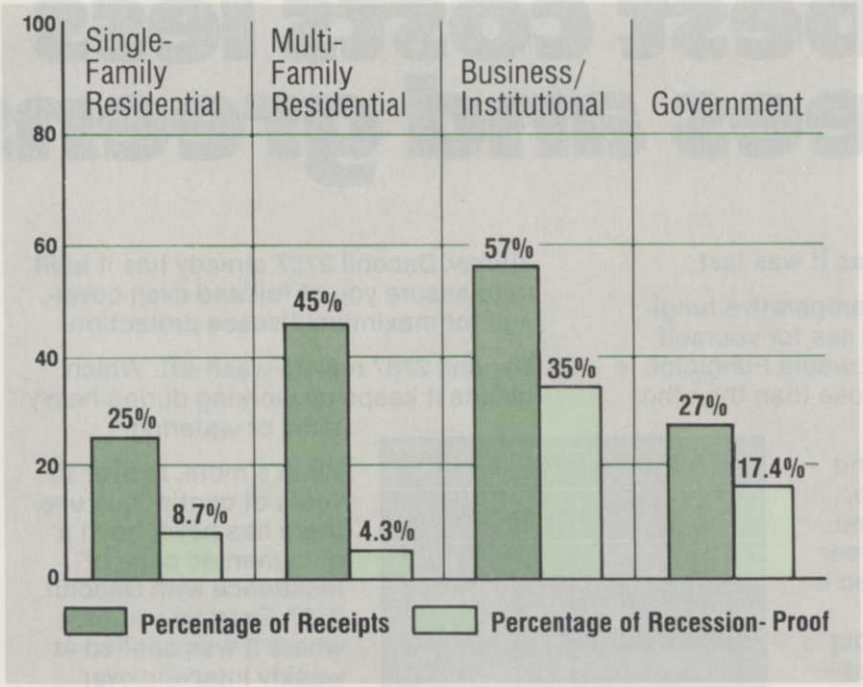
Types of Work by Percentage of Gross Receipts, Architects



advantages of college-trained people. "They tend to be good at decision-making and have good insight to problems when they arise," one contractor said. "On the other hand, they are not always willing to work every task or area, and at times seem more interested in salary or advancement than learning the work." Leadership, initiation, and understanding instructions are three other benefits of college grads listed by contractors.

No amount of education will make up for a lack of experience in the minds of contractors. "We find it takes one year to 18 months to get a new hire up to speed," another contractor said. "The best indicator of a good college grad is his willingness to do "all" types of work, to get dirty, and to be adept with equipment."

Contractors say the potential for design work is satisfactory but that the potential for construction is greater. The architects sur-

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Lebanon is also a chemical distributor of other major proprietary products made for the turf industry.

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SEE PAGE 70

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"Welcome to the South's next great winter golf green."
—Howard Kaerwer, Director of Turf Research at Northrup King's Research Center
From one of these unlikely looking clumps of ryegrass will come the next improvement in Northrup King Medalist Brand® Overseeding Mixtures. The South's most successful blends for over a decade.
Howard Kaerwer and the Northrup King research team have devoted thirty years to developing new grasses and perfecting blends. The results are products such as Medalist 7 Brand, the rugged, dependable ryegrass blend that lets *you* control transition. And new grasses like Delray, with lower nitrogen requirements and better tillering than any other ryegrass on the market.
When Howard isn't in the lab he's on the links talking to superintendents, conducting field experiments and collecting new grass samples to bring back for testing.
Has Howard's hard work paid off? Ten years after the introduction of Medalist Brand, 90% of 250 original customers were still with Northrup King. And since then, the number has grown to over 400 golf courses throughout the South.
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NORTHRUP KING
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FINE LEAFED PERENNIAL RYEGRASS
MEDALIST

Potential for Business, Contractors

	POTENTIAL		
	Great	Satisfactory	Poor
DESIGN	21.2%	54.5%	15%
CONSTRUCTION	54.5%	42.4%	3%
MAINTENANCE	51.5%	30.3%	6%

veyed predict design work to grow by 15 percent in 1984, 9.5 percent in 1985, 9.8 percent in 1986, and 12.3 percent in 1987. These are averages. Some architects expect business to grow more than 30 percent per year for the next four years. Others forecast reductions of 10 to 30 percent.

Layoffs were widespread the past three years with 49 percent of the contractors. Nearly a fourth of the contractors shifted construction crewmembers to other types of work to keep them on the payroll during the recession.

A fourth of the contractors said their work never slowed. Half said business is picking up and the future is bright. More than 20 percent, however, indicated local economic conditions were holding them back indefinitely.

Forty-four percent of the contractors said they are now buying equipment which they put off buying the past three years. That means everyone except the con-

Move It!

Vermeer Tree Spades

Powerful, hydraulically-controlled, tree-moving machines that transplant and package trees/shrubs . . . in minutes!

- 2-8" diameter trees
- One man operation
- Short tower design for greater access
- Fully curved steel spade

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Package It!

Vermeer TS-32 Tree Spade

Designed specifically for tree packaging operations. Simple three-spade system forms neat, clean "tree package" for easy handling/burlaping/balling.

- Adapts to both loader and tractor (with Cat. II, 3-pt. hitch)
- Short tower design with powerful chain reduction drive system.

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Grind It!

Vermeer Handle-Bar Stump Cutters

Finest, self-propelled handle-bar unit in the field. Outstanding leverage and control! Cuts out stumps . . . up to 30" wide, down to 8" deep, without repositioning.

- Compact. Squeezes thru ordinary yard gate.
- Rugged 18 hp engine.
- Easy to operate . . . to maneuver . . . to transport.

Circle No. 170

Cut It!

Vermeer Stump Cutters

Fastest, most cost-efficient, most effective way to remove dangerous, ugly tree stumps! Hydraulically cuts 'em out in minutes.

- Simple one-man operation.
- Easy to maintain.
- Four different sizes . . . from economical, self-propelled handle bar-style models to powerful commercial units.

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Chip It!

Vermeer 1600 Brush Chipper

Toughest, most powerful brush chipper on the street today. Built for high production volume with solid, heavy-duty construction throughout.

- Instant Feed stop. Cuts off access to rotor in .5 of a second.
- Convenient sales and service centers all over North America.

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tractors held back by local conditions are buying as normal.

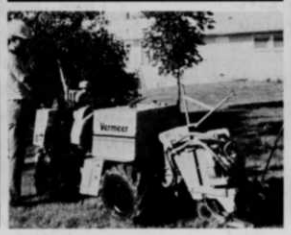
Architects say they do regularly recommend contractors for their work. The most important things they look for in a contractor are the quality of workmanship, following directions, understanding and accepting the purpose of the landscape plan, finishing all the work on schedule, and honest bidding. The architects want contractors to discuss substitutions and quality of plant material with them without fighting the plan.

Contractors deny that substitutions are a major problem but doubt if architects check with local nurseries before specifying plants. They also feel nurseries should share the risk of a guarantee with them more than they do. More than half the contractors said they would consider lowering the installed price of material if they received a one-year maintenance contract following installation. **WT&T**

Type of Work by Percentage of Gross Receipts, Contractors

	1981	1982	1983
DESIGN	13.7%	15.6%	19.4%
CONSTRUCTION	44.8%	47%	50.6%
MAINTENANCE	52.7%	49.1%	50.6%

Pump It! **Plow It!** **Trench It!** **Win It! $5000**



Vermeer DP-24 Pump

20,000 gpm!* Huge capacity, tractor-powered drainage pump with 24" discharge designed for flood control near dikes/levees.

- Highly mobile. Trailer-mounted.
- Attaches to PTO of tractor.
- 24" diameter tubing available in 100 ft. lengths.

*rated at 100 hp.

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Vermeer LM-35 Plow

Buries cable at speeds up to 235 fpm without tearing up finished surfaces. Or, turn it around and trench up to 5" wide, down to 3 ft. deep.

- 35 hp Deutz diesel engine.
- Hydraulic steering and propel.
- Just 35½" wide.

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Vermeer V-440 Trencher

Rugged, rigid-frame, 4-wheel drive trencher. Outstanding digging torque. Most powerful trencher boom in its class. Compact. Streamlined. Built to handle a heavy diet of work.

- Digging capacities: 6-12 inches wide, down to 60 inches deep.
- Vibratory plow, backhoe, dozer blade, reel carrier

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That's right! Win $5,000 cash in the Vermeer "New Generation" sweepstakes contest going on right now!*

How do you sign up?

Just stop in and register at your nearest Vermeer dealership before July 15, 1984. Absolutely no obligation. Winners will be announced on July 30, 1984. Discover the "New Generation" of Vermeer equipment and be a winner. Sign up today.

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*Call toll-free 1-(800)-247-2347**

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What makes the Cushman Grass Grooming System worth the investment:

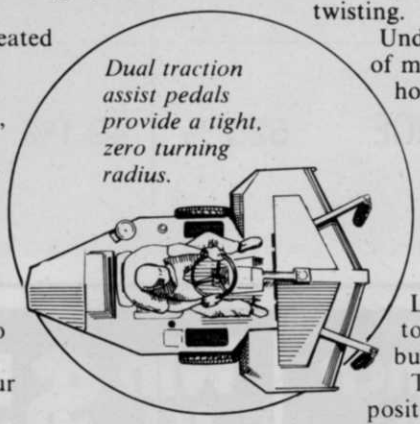
No mower on the market can match it for price and performance. Nothing cuts, catches and dumps as fast or as economically.

The problem with most mowers is that no matter how fast they cut, your work slows to a turtle's pace when it comes to cleaning up the clippings.

That's why we created the Cushman Grass Grooming System. With it you can cut, catch, dump and resume cutting without interruption.

But, as you are about to learn, the Cushman Grass Grooming System not only lets you do your work faster.

It lets you do your work better.



Dual traction assist pedals provide a tight, zero turning radius.

Engineered for hard work.

At the heart of our Grass Grooming System is the dependable Cushman Front Line™ mower.

And at the heart of the Front Line is a rugged, 18 hp, air-cooled OMC gas engine. It's the only mowing engine built for multi-speed work — lugging power at low speeds, agility at faster speeds.

This proven power plant is complemented by a drive train that's engineered for years of dependable service.

A hydrostatic transmission that gives the driver complete speed control via a rocking foot pedal.

A heavy-duty differential; a fully lubricated PTO shaft; and a high-capacity gear box — all engineered for virtually maintenance-free operation.

And that's just the beginning.

Built to last.

The Front Line is 1200 pounds of gutsy engineering.

Its mowing deck is 12-gauge carbon steel, reinforced, arc-welded and surrounded by a tubular torsion bar system that prevents twisting.

Underneath are 3 blades of machine-sharpened, hot-formed steel.

The floorboard is diamond-plate steel. And the 6-gallon fuel tank is made of terneplated steel.

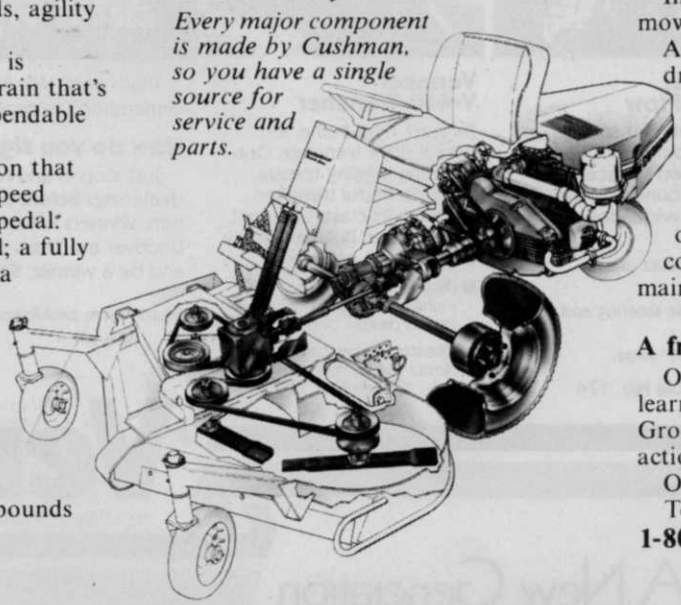
But the Front Line is not just built to last — it's also built for results.

The blades are positioned so that their cutting swaths overlap slightly, leaving no uncut strips of grass.

Dual traction assist pedals give the operator a tight, zero turning radius.

Springs transfer much of the deck weight to the tractor, producing smoother cutting and additional traction on any terrain.

Every major component is made by Cushman, so you have a single source for service and parts.



And while ordinary mowers often "bottom out" over hills and bumps, the Front Line may be equipped with an anti-scalp roller option that keeps the cut clean and even.

The finishing touch.

The Grass Caddy collects up to 16 bushels between dumps.

The innovative Cushman Grass Caddy™ makes the Front Line the world's most labor-saving mower. Mounted to the operator's right, the Grass Caddy collects up to 16 bushels of clippings and debris inside a durable, non-stick polyolefin hopper.

Then, when the hopper is filled, just back the Front Line up to a truck or container, engage the hydraulic control and the Grass Caddy hopper lifts 4½ feet above the ground and dumps.

In seconds, you're back on the turf mowing again.

And you've never once left the driver's seat.

The Grass Grooming System is available only from your Cushman Front Line dealer. He's in business for the long haul, with a proven track record of service after the sale and a complete line of professional turf maintenance equipment.

A free demonstration.

Of course, the best way for you to learn about the Cushman Grass Grooming System is to see it in action.

On your grounds.

To do that, just call us toll-free: **1-800-228-4444.**

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☐ Please arrange a demonstration of the Cushman Grass Grooming System.

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It works harder because it's built better.

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LANDSCAPE MANAGEMENT

Courting Success

"Growing people," a commitment to quality and delivering what the client wants are specialties of the Brickman group -- one of the largest design/build, maintenance companies in the nation.

by Maureen Hrehocik, managing editor

Dick Brickman makes success seem so easy.

Like an athlete in training, his companies, Brickman Industries and the Theodore Brickman Co., continually reach for the best -- in recruiting, training, management and motivation of their people and excellence in all phases of their work.

"Some teams play offense, some defense. We do both," says Brickman, 52, president and chief executive officer of the Brickman group.

Simply, Brickman's statement sums up the corporate philosophy of one of the major success stories in the design/build, maintenance business. Brickman Industries, the maintenance portion of the business, and the Theodore Brickman Co., the design/build portion, forming the Brickman group, is the largest company of its kind in the country.

Dollar volume for 1983 is expected to be around $14 million. Next year, the company hopes to do $16 million. Brickman also owns the 40-acre Maple Leaf Nursery in Long Grove, IL. It supplies to Brickman jobs only. The Brickman corporate client list includes AT&T, Allied Corporation, Arco Chemicals, Bell Labs, Exxon, McDonalds Corp. and Rust-oleum. Condominium and apartment projects, shopping centers, banks, insurance companies, industrial parks, universities, recreation centers, office buildings, private businesses and residences have all been a part of the company's extensive job list.

John Mickle, left, marketing and sales manager for the East territory, *Don Synnestvedt, operations manager of Brickman Industries, and Dick Brickman, president and chief executive officer of the Brickman group.*

Brickman does no advertising. It's finished projects are its greatest public relations tool.

And while Dick Brickman is proud of the projects his company has worked on, it is in the company's people where the greatest investment has been made.

"We can only grow as quickly as we can grow people," says Brickman, sitting in his newest branch office in Langhorne, PA, right outside of Philadelphia.

"We look to long-term tenure of our employees and because of this we have very low turnover. We want to grow for financial reasons,

A condominum development in Lancaster, *PA, before and after the Brickman group designed and executed the landscaping.*

but equally important to us is growing to satisfy the creative needs of our employees."

Teamwork

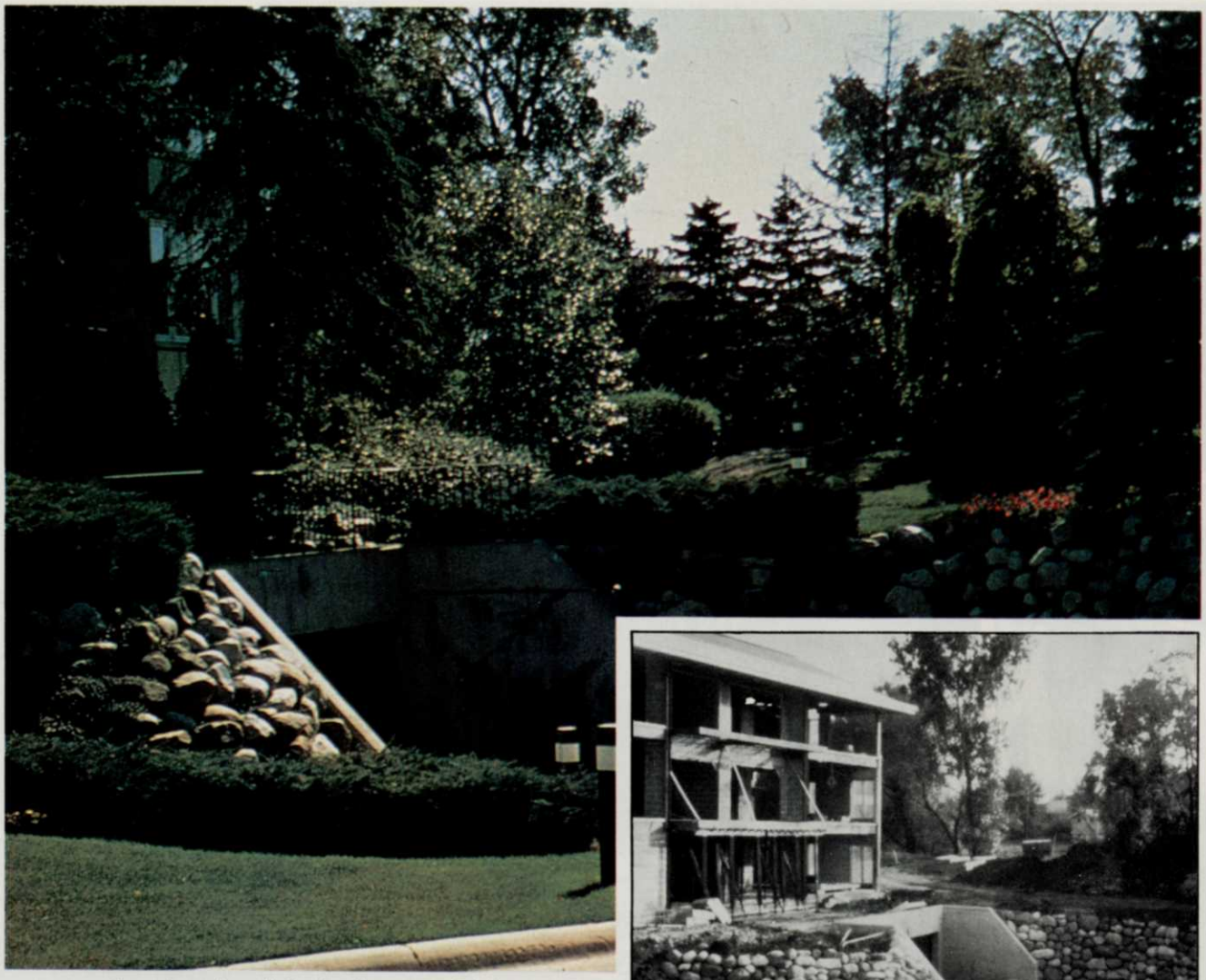
Intensive training programs, continuing education on the enrichment and graduate levels, and regular discussion sessions with employees and supervisors are some of Brickman's ways of investing in his people.

"As chief executive officer, it's my job to be the main company cheerleader and set the motivational tone. Everyone has his own style. I'm not a speech-giver. I believe in more personal contact. I have a dedicated, sincere interest in our people."

The corporate structure of the company is streamline. Dick Brickman, as president, oversees the entire company and is responsible for planning, major clients and policy-making. His brother, Bob, in Long Grove, is executive vice president. Don Synnestvedt, in Langhorne, is operations manager of Brickman Industries and oversees all four of the company's maintenance divisions. Bruce Hunt in Illinois is operations manager of design/build with a Langhorne and Long Grove division employing 20 landscape architects. On the same level is a finance head and marketing sales manager, each with an east and west division. Depending on the season, Brickman employs between 200 and 500 people. Each Brickman office, in Long Grove, Langhorne, Morristown, NJ and Laurel, MD, has developed its own, specific training program.

In the maintenance division, employees are given a 28-component test, ranging from job planning to employee relations representing 400 hours of training. The division also has a 40-hour winter program.

Behavioral analysis tests are given before promotions and everyone is evaluated semi-annually.



A sculpturing of the landscape, *a Brickman group philosophy, is evident at the Oakbrook Club, a multi-residential development in Oak Brook, IL.*

"While there is no pass/fail, this type of test gives phenomenal insight into a person," explained Brickman. "Sometimes we've seen the results years later."

For the most part, the company has formulated its own training programs, but has also adapted from corporate training programs such as Perron-Ambrose and Kraft.

Everything from MBA degrees to personal enrichment courses are encouraged -- and financed -- by Brickman after an employee has been with the company a year.

"We've never declined a request from an employee for any kind of course," said Brickman.

When hiring, the Brickman group is looking more and more toward trained managers, people from graduate and specialty schools and strong on the business side.

"Traditionally, the type of person attracted to this field are those who like to make things look healthy and who are more 'artsy.' There aren't too many with a business background."

Brickman said 80 percent of the company's recruiting is done through schools.

The company also plans to formally start "quality circle" groups. In these sessions a trained leader or superintendent meets with employees once a week to hash out company issues as they apply to customers.

"This really gives us a chance to get our field people involved in the decision-making process," explained Brickman.

At a more basic level, Brickman believes in cross-training his employees to provide the type of service clients need. The designers are taught what goes into maintaining a project and the maintenance group is taught to understand the intent of the design.

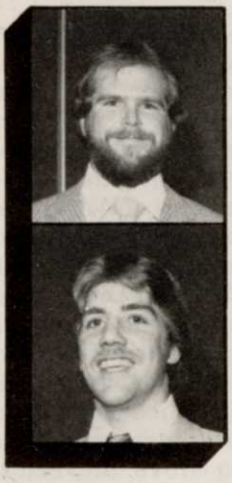
Back door

"Our designers are in the field," he says. "In the client's mind we provide a total service, that's why we cross train."

Brickman said design/build used to be considered unprofessional. Now, it is the fastest grow-

CONGRATULATIONS

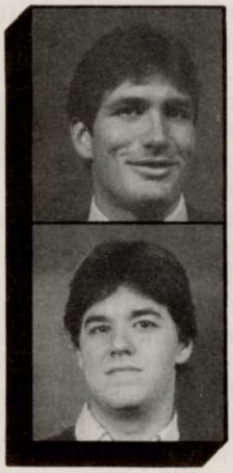
1982-83 TUCO-TURF SCHOLARSHIP RECIPIENTS



Michigan State University
William L. Berndt
David Hollens

California State Polytechnic University
Kent M. Davidson
Timothy D. Deutscher

For nearly a decade, TUCO has awarded scholarships to demonstrate its commitment to the turf industry and its dedication to meeting industry needs — present and future. Cooperating universities have selected these scholarship winners while TUCO commits itself to product development, research and to achievement of the industry's professional goals.



University of Massachusetts
Craig F. Manning
Michael P. O'Connor

University of Florida
J. C. Wildmon

Oregon State University
Russell Vandehey

Ohio State University
Mark W. Seigfreid

Purdue University
Ed Hoevet
John P. Howard

Texas A&M University
Michael Yarotsky

North Carolina State University
Barry Carter

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Division of The Upjohn Company, Kalamazoo, Michigan 49001

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ing segment of the industry. Profit in this area is no longer a dirty word.

"With many firms today, design/build is looked upon as a fad," said Brickman. "Some contractors have looked to it to avoid the bidding process." At Brickman, design/build is hardly a fad.

"We look on design/build as a sculpturing process," said Brickman. "The execution is as much a design project as it is at the conceptual stage. We want to control a project until it looks right."

The design philosophy at Brickman keeps in mind the costs of construction and maintenance. The way a design is put together effects the maintenance.

Brickman got into the maintenance end of the business through the proverbial back door.

It was while the company was working on the McDonald's hamburger corporate headquarters in Oakbrook, IL, that the question of maintenance surfaced.

"I remember Fred Turner (of McDonald's) asking me once we completed our work, who was going to take care of it," recalled Brickman. "You can guess what our answer was. That's when we really got started in the maintenance business."

So, in 1977, the company turned its attention to aggressively pursuing just maintenance contracts.

Maintenance, now the foundation of the company's revenues, accounts for 60 percent of business (around $8 or $9 million) and Brickman would like to see it become 2/3 of the company's business in the future.

Don Synnestvedt, maintenance operations manager, oversees all four of the company's maintenance operations. Synnestvedt's background has been in the landscaping and nursery business, working with his uncle, Ralph, at Synnestvedt Nurseries in the Chicago area. He has been with Brickman 13 years and is now based in Langhorne, where, with his other duties, is temporarily in charge of the maintenance division there.

Besides the obvious financial benefits of the division, Brickman says one of the most important things about maintenance is it serves as the "security blanket" for the company's design/build division.

"Because we maintain a project, we can preserve the design integrity our architects have built into each site.

"Our getting into maintenance was a stroke of genius," Brickman continued, "because it provides us with an insurance for a project. If properly designed and maintained, a project can be an asset that really grows."

Brickman believes in cross-training his employees to provide the type of service clients' expect.

Because of the quality of its work, the company has won many awards, and, according to Brickman, these are the company's best calling cards.

"The area we've really been deficient in is marketing and strategic planning." Brickman said in the Chicago area especially, there are a number of firms copying their work - and cutting prices to do it.

"We've been a little too complacent (in the marketing area)," he said.

That lack of strategic planning, though, hasn't seemed to hobble the company's growth.

In the beginning

Theodore W. Brickman, Dick's father, is the founder of the Brickman group. At 77, he is chairman of the board and still keeps abreast of the company's business. It is Dick, though, who runs the day-to-day affairs. Brickman Sr. was drawn into the horticultural business in Texas. Later he was in charge of the gardens at the Century of Progress International Exposition in Chicago in the 30s.

In 1939, after working with the Chicago Park System as a horticulturist, he started his own landscape business in Glenview, IL. His business was interrupted in 1941 with the start of World War II and gas rationing. In 1945, Brickman reopened his business. It wasn't until 1957 that Dick Brickman, after getting his degree in landscape architecture from the University of Illinois, joined his father. In 1959, Theodore Brickman Co. was incorporated and moved to Long Grove. Bob Brickman became active in the firm in 1961. With Dick's arrival and that of Bruce Hunt in 1961 (Hunt is currently operations manager of design/build), the company started to evolve away from its "grass cutting" image and into landscaping. "When we first started out in the business, we were mainly in residential," recalls Brickman. "I got sick of dealing with housewives. We went through a transitional period where we didn't do any residential work."

A project for Standard Oil was their first major design/build job.

"We got the contract for landscaping all the Oasis gas stops along the Illinois Toll Road," recalled Brickman. "That one job was worth more than we made all year. It scared the hell out of Dad. As it turned out, we did the project, but on a smaller scale."

Now, most of the company's contracts are in the commercial and institutional areas, although if a major client needs something residential done, Brickman will usually do it.

"We've had some very successful residential projects," he said.

With the company's continued growth, branch offices continue to be a necessity; operations in Langhorne were set up in 1977, in the Washington area in 1980.

"We create branches where it's necessary within the limits of our resources - mainly people resources," said Brickman.

Brickman says he has no plans

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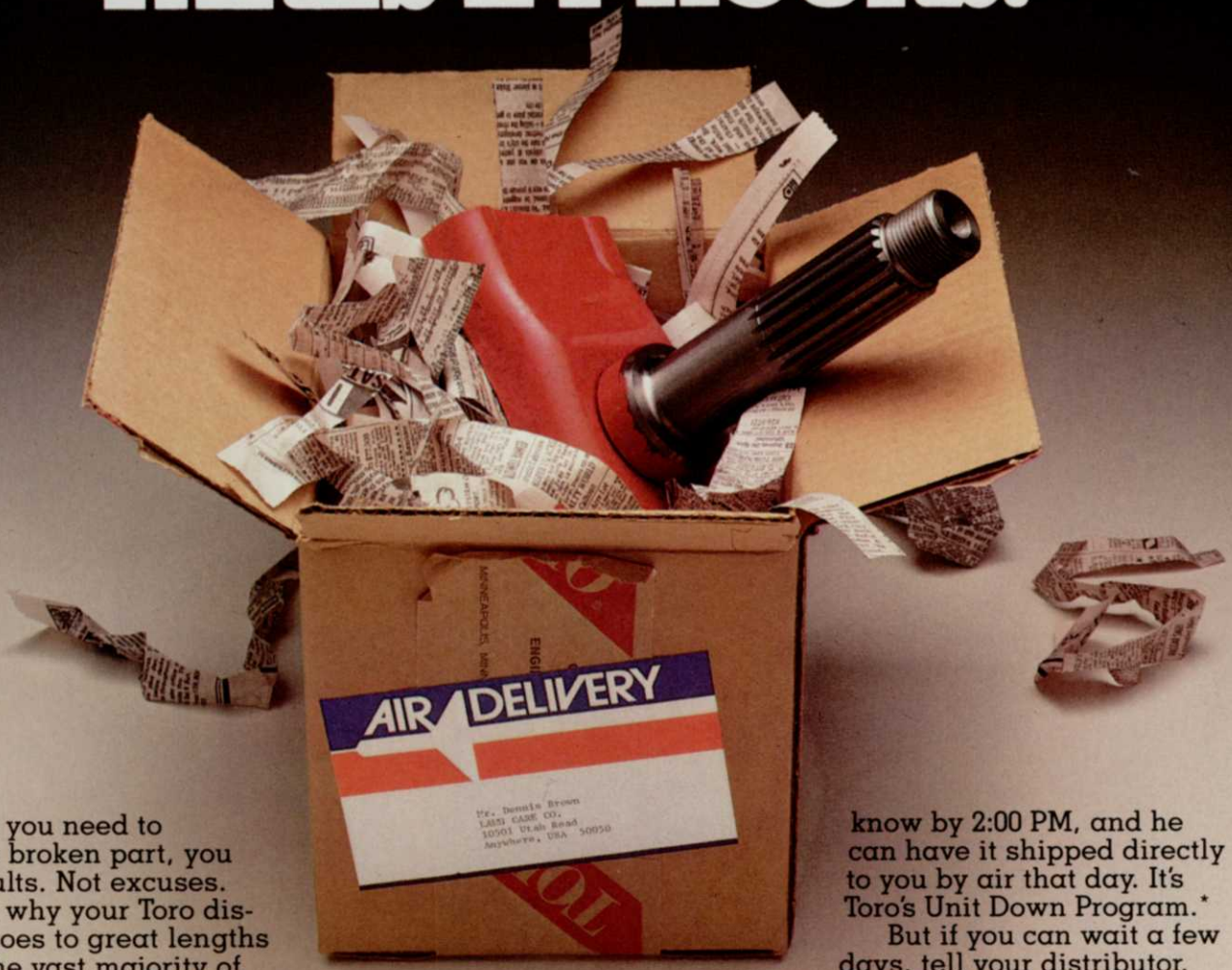

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LANDSCAPE MANAGEMENT

Riding the Tide

Bill Orr is young and ambitious. His landscape contracting business, Houston Landscape Associates, is steadily growing while many area landscape contracting businesses are falling by the wayside.

by Maureen Hrehocik, managing editor

An entrance to 6363 Woodway, *a Houston complex. Containerized plants add softness to well-manicured turf and bedding plants.*

Bill Orr, a Houston landscape contractor, was returning home from work one day a few years ago, when he saw Spot, his dalmatian, in the middle of the road, licking the hand of a complete stranger.

He stopped to talk to the man Spot had befriended. As it turned out, the stranger, a developer, had stopped to admire a piece of landscaping Orr had done and Spot had stopped to check-out the stranger.

From that purely chance meeting, Orr and the developer began a business relationship that resulted in about nine projects for the then-aspiring landscape contractor.

That type of business relationship was important to Bill Orr back in those leaner days.

After quitting a secure position with a Houston landscape design/build firm, Landscape Design Associates, Orr started his own company, Houston Landscape Associates in 1974.

At first, he was partner with two principals from LDA. The plan was that Orr would supply the ideas and brain power and LDA would provide work for Orr from an already-established client list. After six months, though, Orr thought he could handle the business — and the profits — better on his own.

He worked out of his one-bedroom apartment; his drafting table tucked away in a corner. Business-wise, he found that he wasn't an established-enough name to command the type of contracts he needed to stay afloat. That's why any type of help was appreciated, even from his dog. While his profits diminished, his ambition didn't.

Things have changed. Houston Landscape Associates will do about $1.6 million in business this year and averaged $1.5 million each of the previous two years. Contracts have been signed already with buildings that have yet to start construction. The 35-year-old has branched out as 50 percent partner in another satellite company, HLA Construction, whose success potential Orr describes as "like sitting on a powder keg."

A thoroughbred

Houston Landscape Associates has carved a unique niche for itself in the competitive Houston landscape contracting scene. While many landscape contractors are languishing at a dead period in the Houston construction boom, Orr's company, mainly because of the quality of it's work and attitude toward projects, is moving ahead.

"We're riding the tide," Orr says.

"We have a good sense of taste and we're not a bit bashful about saying to a contractor a change needs to be made," Orr continued. "We're best at more elaborate design plans and projects with more frills, because we pay attention to detail. We're not a mass production-type contractor.

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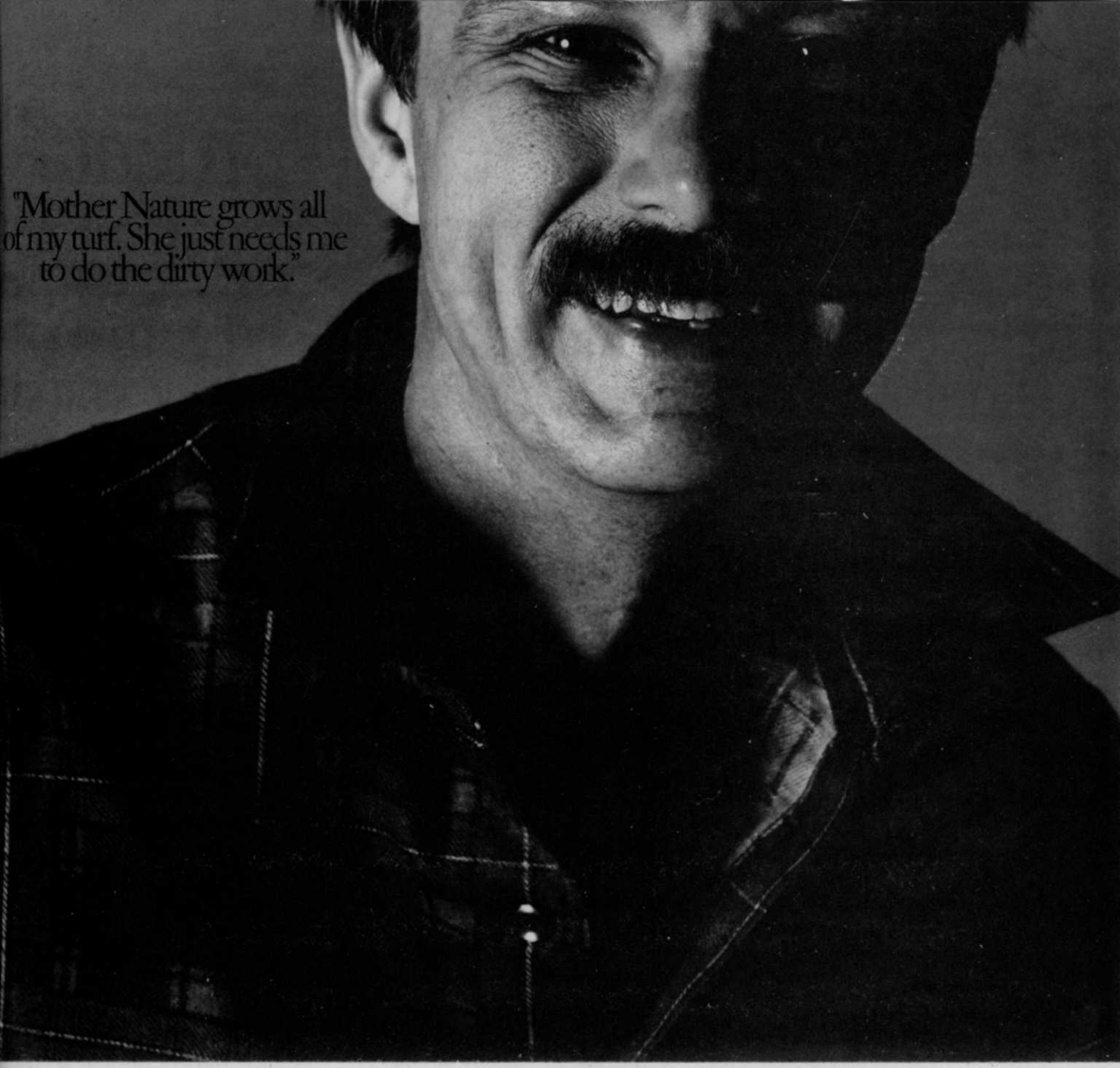

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The Greensaire 16 offers the same thorough aeration, but in a more economical size. You get a 16″ swath; 36 cores per square foot; and a speed of up to 4,000 square feet per hour. An optional windrow attachment makes clean-up simple.

Both units are available with revolutionary heat-treated tines that provide self sharpening action and less plugging-up.

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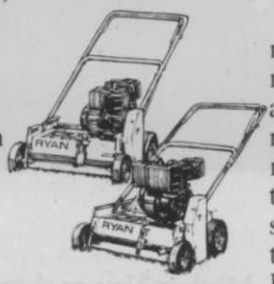

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ORR *from page 56*

We've been accused of being too slow, but it pays off in the end."

Orr also said he doesn't believe in bidding low just to get a contract.

"Attitude to me is extremely important," he explained. "We're more interested in making a project a success than in making a profit. I try to price my work high enough to accomodate any changes that may have to be made when we get into it."

That attention to detail and excellence has spawned a very mutually-satisfying relationship with Houston's largest landscape design company, the SWA Group.

Building clientele

Orr shared a client at an office project called Riverway in Houston with SWA. SWA liked what it saw and has used Orr's company frequently since then.

Kevin Shanley, a landscape architect with SWA said, "Bill does very high quality work and that's why we've kept up our relationship with him."

Many local contractors credit SWA with changing the landscape design and contracting face of Houston. Their trademark style is literally everywhere in the city — park-like atmospheres, inviting people to use the landscape, not just look at it; pedestrian bridges interlocking the scores of highrise office and shopping structures; a softening of what was a very sterile and cold downtown Houston area. In other words, sophistication.

Orr's company has also been involved with Joe Russo, a developer. Together, they have worked on three or four "landmark" projects, according to Orr. He is also responsible and particularly proud of his work at Sage Plaza One, another Houston office complex.

Houston Landscape Associates has done the landscaping for numerous Russo office buildings in downtown Houston, including 7500 San Felipe, 1616 Voss and 6363 Woodway.

Bill F. Orr

"The San Felipe building is the perfect example of what we like to do," said Orr. "Joe Russo believes strongly in what the landscape can do in attracting tenants to buildings."

The San Felipe building was also Orr's first taste of "hardscaping," fountains, walkways and pedestrian bridge-type constructions and what lead him into a partnership with Joe Schofield, a contractor. HLA Contracting was born.

"We've been at it for a little less than a year now and it hasn't been easy," Orr commented. "Joe and I have butted heads, but things are falling into place. This company is filling a void in the market."

Orr explained that void through his own company.

"Most of Houston Landscape Associate's competitors haven't figured out how to tackle the hardscape aspect of their work. This left an interesting niche to fill. They usually have to lean on a general contractor to do it. HLA Construction fills that niche. We provide an important convenience to the client."

Business for HLA Construction is, in Orr's words, "as good as I want it to be."

The company did $3/4 million in business in '83 and Orr is shooting for $2 to $3 million in '84.

"The availability of work in this segment of the industry is unbelievable. But, we're going to take it one step at a time."

Orr and Schofield want to get involved in recreation centers, but aren't known in that market - yet.

"Recreation centers are John's bailiwick," said Orr.

Orr characterizes himself as a cautious businessman.

"I'm responsible for sales for HLA Construction and I've purposely been cautious. I don't want to move too fast and undermine what we already have accomplished with the company."

Orr said he and his partner also didn't realize the time commitment the new company would demand.

"I'm not a workaholic," Orr admits. "I'll work 16 hours a day if I need to, but not to the point where my family-life suffers."

Art in the landscape

Orr got his B.S. degree in park administration with an emphasis on landscape architecture from Texas Tech in August of '72.

"I dabbled in business courses for a year and did lousy. I took a year of architecture and did O.K. I took a course in art and did real well and applied it to landscape architecture."

Orr went into landscape contracting for three reasons: he liked it, he knew he could do it, and it was easy. He admits his business sense was learned by the seat of his pants and from consultants he's surrounded himself with who understand him and his company.

"With most of the consultants I've worked with, we have an almost father-son relationship," said Orr. "I knew I could do the landscape side if I could just get the business side nailed down."

It's people like Warren Purdy and business consultant John Gannon who have congealed the business side of Orr's company.

"Warren realizes that landscape contractors are more doers than thinkers. I searched and searched for an accountant who understood our business and finally found one who does. Same thing with our attorneys. They are the type of people who take a per-

continued on page 96

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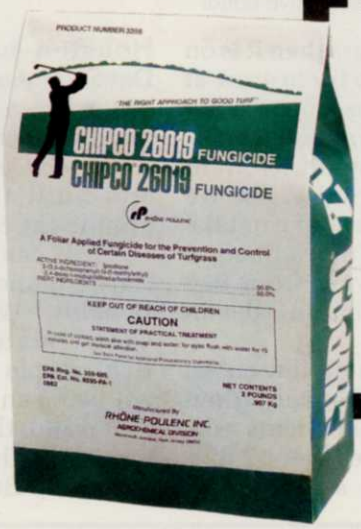

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LANDSCAPE MANAGEMENT

Environmental Industries Inc. Grows as Fast as Its People Can

Large west coast company avoids publicity and concentrates on building a company around its employees

by Bruce F. Shank, executive editor

The management of Environmental Industries, Calabasas, CA, doesn't seek publicity. Success is something they don't like to flaunt. In fact, many people still think 'the big landscape company in California' is Valley Crest Landscape, it's old name.

"Although we have grown rapidly, we are not motivated by taking over the nursery, construction, or maintenance business," says Bruce Wilson, president of Environmental Care Inc., the maintenance subsidiary. "Our growth is based more on our people and our customers than it is on sales objectives. We try to grow at a rate that provides opportunity for our people without the wheels falling off. Good employees want growth and opportunity. So, we grow at the rate our staff can take on more work." Environmental Industries has grown from $28 million to $60 million in sales in five years.

"As a rule, we enter new cities, like Houston and Denver, when one of our California clients asks us to handle facilities there," Wilson states. "We started the Houston branch when Shell Development Co., a Los Angeles customer, asked us to take over maintenance at its West Hollow Research Center. We took the job and built the Houston branch around the Shell job."

"You can't go into a city and start a branch as if you are MacDonalds," Wilson pointed out. "It takes years to get your name to the right people and to be accepted as not being an "out-of-towner".

Behind this seemingly loose style is a finely-tuned machine driven by Burton Sperber, presi-

dent and chairman. "His philosophy," Wilson states, "is to let the branches worry about business and corporate to handle details such as banking, insurance and benefits."

From this service core, branch out four subsidiaries. Environmental Care Inc. is the maintenance branch. There are two landscape construction companies, Valley Crest Landscape Inc. and Western Landscape Construction. Valley Crest is the 35-year-old company Sperber built into Environmental Industries. The fourth subsidiary is Valley Crest Tree Co., a nursery operation. The subsidiaries have offices in California, Colorado, Texas, and Arizona with roughly 1,500 employees.

Starting at the bottom

Wilson grew up in Rye, NY, was graduated from Cornell University in 1969, and worked for Starner Tree Service in Harrison, NY, for almost two years. In 1970, he and his wife decided there was no better time to try the "California life" and moved to Los Angeles.

Sperber had just purchased Green Valley Landscape maintenance company from Joe Marsh and formed Environmental Care with Marsh as president. Marsh hired Wilson, started him trimming hedges and mowing turf. Wilson, after working his way up to branch manager, became president of the subsidiary upon Marsh's retirement in 1979.

This 'start at the bottom' policy is still in effect. "It is a disadvantage in recruiting college graduates since they often believe college permits them to skip field work," Wilson muses. "But, they are much more effective later on if they have experienced the type of work they manage."

Keys to growth

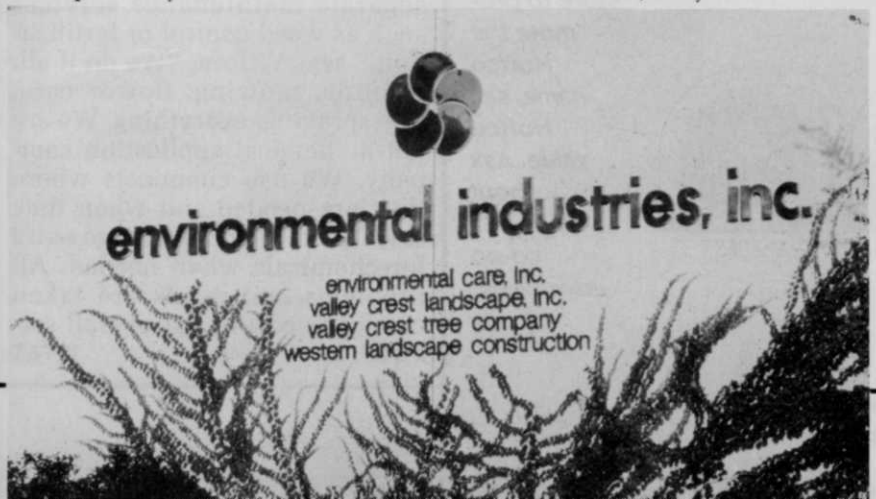
Green Valley specialized in municipal and industrial landscape maintenance. Environmental Care has continued that specialization with more emphasis on industrial and multi-family residential. "We are being moved out of municipal work by low bidders," Wilson said. "Public work is very volatile, going out to bid every two to three years. Industrial/commercial work is based more on quality and reliability than low price."

We are also experiencing an influx of landscape construction companies competing for maintenance work to cover overhead while construction is off. This is cyclical, fortunately, and we'll get our share back when construction picks up again."

"We are not adverse to bidding," Wilson adds. "We make our own subsidiaries bid for work we do. Our biggest problem with bidding in maintenance is most clients don't have specifications, so they are not comparing apples to apples."

Much of Environmental Industries' success today is based on establishing good relationships with developers and corporate level property managers. "A majority of construction and maintenance is in the hands of a

Headquarters *for Environmental Industries in Calabasas, California.*



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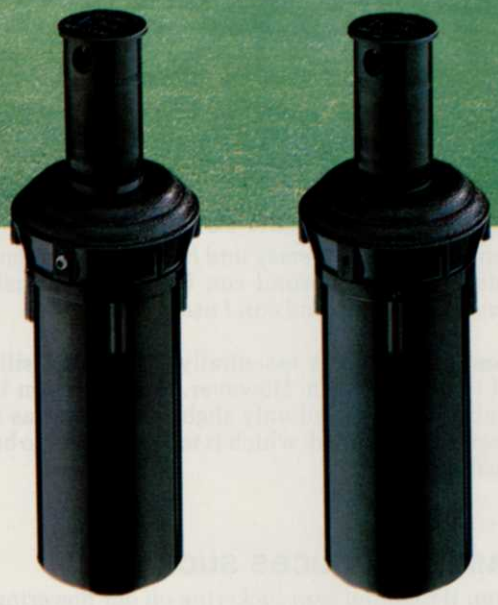
Bruce Wilson, *president of Environmental Care.*

few individuals," Wilson points out. "Impress them with performance, fairness, and quality, and you become part of their team. Undoubtedly, there is danger in relying too greatly on a few accounts, so we try to balance each branch with a variety of accounts."

Attracting a variety of accounts requires flexibility. Large construction work is primarily union, so Valley Crest Landscape, run by Burton Sperber, is union. For smaller, more competitive construction work, Western Landscape Construction, run by Stan Colton, is non-union. To supply plant material to its own construction companies, as well as other landscapers, Environmental Industries has Valley Crest Tree Company, run by Burt's brother Stuart.

After the landscape is in and the unions leave the job site, Environmental Care's non-union crews can take over with maintenance. "We don't generally offer separate maintenance services such as weed control or fertilization," says Wilson. "We do it all, pruning, mowing, flower care, tree spraying, everything. We are not a chemical application company. We use chemicals where they are needed and when they save labor. We don't charge extra for chemicals when needed. All problems and needs are taken care of as part of our overall service." **WT&T**

New Toro® Super 600C . . . we didn't make it bigger, we just made it better!



The non-identical twins; can you tell the difference?

They *look* identical, except for the small set screw on Toro's new Super 600C sprinkler head. That's for the locking cap feature, assuring even greater vandal-resistance. The check valve in the new model is *inside* so you can't see it at all, but it puts a stop to low-head drainage. And the big difference (which you can see only in performance) is the new nozzle selection that lets you apply about twice the gallonage. Just the thing for demanding large-turf applications. Of course, *both* heads offer adjustable radius . . . adjustable arc . . . and locking nozzle. For super results, specify and install Toro Super 600 . . . or, for the bigger job, just add the "C."

SUPER 600C
$23.95 *

SUPER 600
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Dept. WT-284, P.O. Box 489, Riverside, CA 92502

**Manufacturer's suggested list price, subject to dealer option*

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EXCELLENCE IN IRRIGATION

Circle No. 158 on Reader Inquiry Card

PROBLEM SOLVERS

by **Balakrishna Rao,** Ph.D., and **Thomas P. Mog,** Ph.D.

Poison ivy, an occupational pain

Problem: *I work on a landscaping crew and every year I catch poison ivy. How is poison ivy spread and is there anything I can do to prevent getting it again? (Mississippi)*

Solution: Contrary to popular opinion, poison ivy is not spread by the watery liquid within the skin blisters. A resin from the plant causes the itchy rash reaction. Washing the skin immediately after coming in contact with poison ivy may reduce the symptoms. The poison ivy resin sets up in the skin 5-15 minutes after exposure, after which washing will not remove it.

Since you know that you are susceptible to poison ivy, learn to recognize it and where it grows. Your landscaping job probably makes avoidance difficult so wear gloves, coveralls, long-sleeve shirts, etc., to protect your skin. Clothing helps but doesn't guarantee that you will never get it again. Poison ivy can be caught by touching clothing, even animals that have brushed against the plants. Some people are so sensitive that the smoke from burning poison ivy plants causes a serious allergic reaction.

The skin rash itself, although uncomfortable, normally does not cause serious problems. It is the scratching which can lead to infection or damage sensitive tissues. Cold water compresses applied to the rash help dry up the blisters and reduce itching. Salves containing steroids, hydrocortisone and/or antibiotics may be prescribed by a physician. When large areas of the body or delicate areas (eg. the eyes) are involved get prompt, professional medical care.

(Excerpted from an article, "Poison Ivy Cures Founded on Myth," by Sharon McDonald, Resident in Dermatology, Columbus, OH)

Impractical potash fertilizer

Problem: *I live in New Jersey and have been told that local deposits of greensand can be used as potash fertilizers. Is this true and can I use it on lawns?*

Solution: Greensand is essentially a hydrated silicate of iron and potash. However, the potassium is insoluable in water and only slightly available as a fertilizer unless refined, which is too expensive to be practical.

Regulator reduces suckering

Problem: *We cannot stop suckering on our flowering crabs and apple trees. Is there anything, other than the pruning we have done repeatedly, which works?*

Solution: Suckering of ornamental trees, especially flowering crabapple trees, is nearly impossible to prevent via pruning. Various sprout inhibiting chemicals and herbicides have been tried but have not been particularly effective. I should caution that the use of herbicides for sprout control is not recommended. The systemic herbicides, i.e., those which move throughout the plant, when misused can cause considerable injury, even death of the treated tree.

Ohio State University has tested a growth regulator called Tree-Hold Sprout Inhibitor A112, manufactured by Union Carbide. This material is registered for use on crabapples, pear, olive and bearing and nonbearing apple trees. Sprout regrowth from the trunk, from limbs after a branch was removed, and suckering from the base of the tree was stopped when the product was used according to the instructions on the label.

The A112 sprout inhibitor can be applied with a brush or sprayed on. To test for control of basal sprouts and root suckers, the existing shoots were pruned out and the sprout inhibitor applied during the tree's dormant period. The material was also tested by applying it to live suckers, 6-12 inches long. Both procedures successfully prevented sprout regrowth.

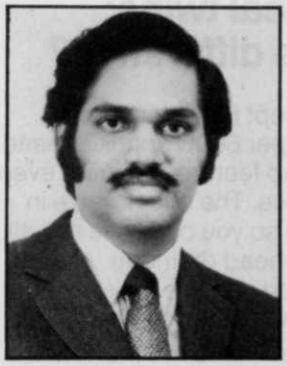
More information about product availability, cost and application rates should be available from Union Carbide or their distributors. We have not tested Tree-Hold Sprout Inhibitor A112, but the OSU results warrant its mention as a possible solution to your suckering problem.

Yellow nutsedge control

Problem: *We sprayed nutsedge with Basagran last year and thought we got control but it's back this year worse than ever. Is there a better herbicide on the market that can be used on lawns? (Virginia)*

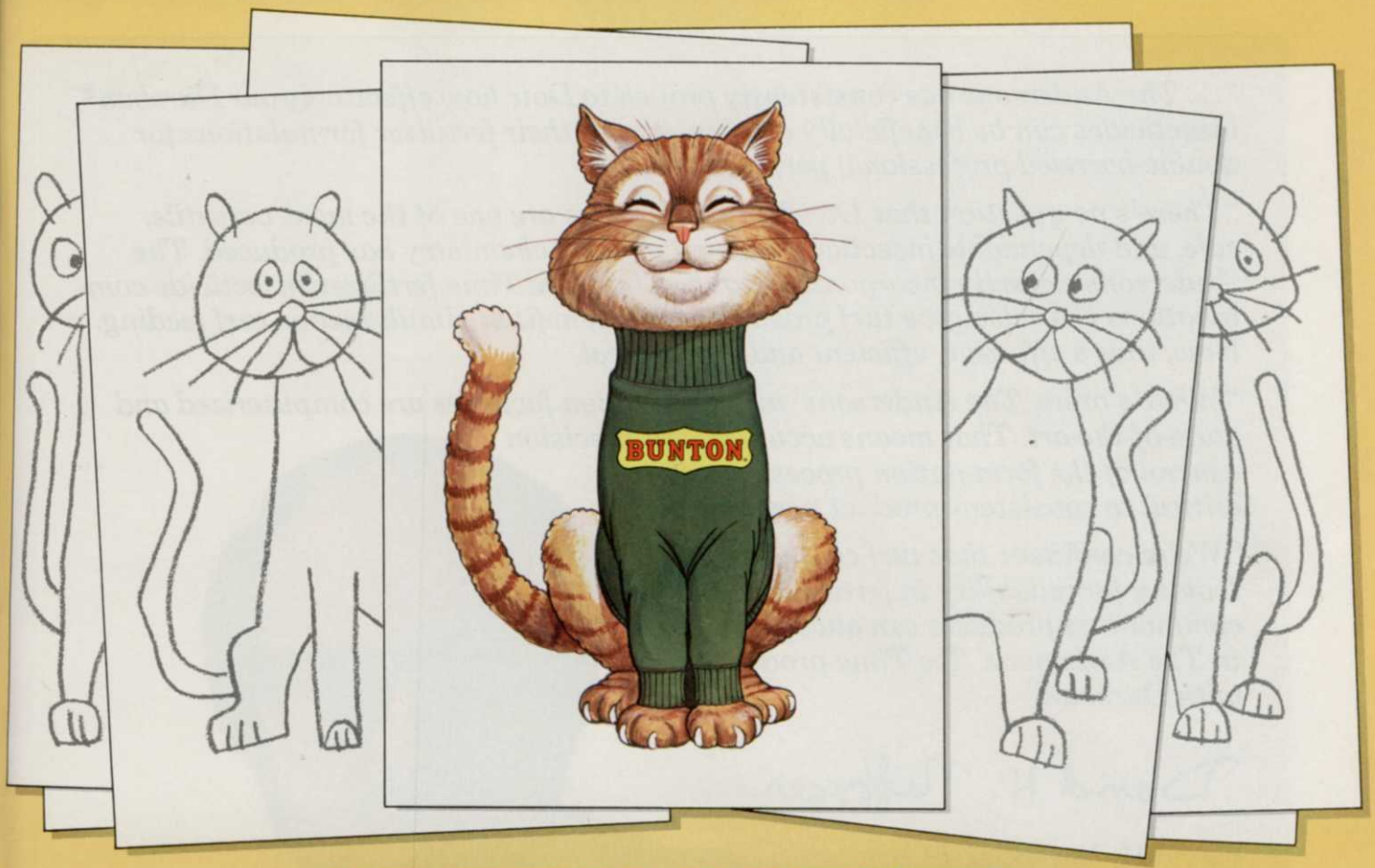
Solution: Assuming you are referring to yellow nutsedge, Basagran should give you good control. As a sedge, nutsedge spreads through underground tubers which can be controlled with Basagran if they are connected to actively growing shoots. Proper coverage of the plants is essential since Basagran is absorbed through the foliage and does not translo-

continued on page 89



Balakrishna Rao is plant pathologist and Thomas Mog is pest management specialist for Davey Tree Expert Co., Kent, OH.

Questions should be mailed to Problem Solver, Weeds Trees & Turf, 7500 Old Oak Boulevard, Cleveland, Ohio 44130. Please allow 2-3 months for an answer to appear in the magazine.



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Suddenly, it seems everyone knows exactly what you need in a commercial mower. Amazingly enough, they all look just like a Bunton. Too bad they don't perform like one.

The Bunton commercial mower has proven itself with a thirty-year track record. That's why it's been copied. Here's why it hasn't been matched:

- **Quality of cut.** If you own a Bunton and *any* other brand, you already know which one produces the better cut, more consistently and with less downtime. That's why Bunton is preferred by lawn service professionals everywhere.
- **Choice of type, size and power.** You don't have to "make do" with a mower that's not quite right for your situation, or wait until next year when they *say* they'll introduce the size and type you need. We have it now. Have had it for years. And with Bunton you don't have to take the engine that "comes with the mower." We match one of nine commercial engines to your size and application.
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Overall, it costs less to own a Bunton than a cheap imitation, because... Bunton builds 'em better. For complete information on the largest selection of the industry's most popular commercial mowers, please write or call for our new full line catalog and the name of the Bunton dealer in your area.

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"... The Andersons has consistently proven to Dow how effectively our Dursban® insecticides can be beneficially combined with their fertilizer formulations for double-barreled professional performance.

"There's no question that Dursban insecticides are one of the most versatile, safe, and dependable insecticides which modern chemistry has produced. The Andersons expertly incorporate Dursban into Tee Time fertilizer/insecticide combinations that also give turf pros the added benefit of simultaneous turf feeding. Now, that's effective, efficient and economical.

"What's more, The Andersons' new production facilities are computerized and state-of-the-art. That means accuracy and precision control of the formulation process which is critical to consistent product performance.

"We're confident that turf care pros looking for reliability in fertilizer/insecticide combination products can always find it in The Andersons' Tee Time products with Dursban."

David H. Naffziger

David H. Naffziger, M.S.
Product Development Manager,
Dursban Insecticides
The Dow Chemical Company

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DURSBAN® and TEE TIME™

The safe combination you can bank on to beat back bugs.

The investment you make—in time, labor, product and equipment costs—should not only pay-off with the most healthy looking turf possible—it should also yield other high-interest dividends such as repeat business, happy customer referrals and increased profitability.

That's precisely why more and more investment-wise turf care experts bank on Tee Time and Dursban insecticides.

Sod webworms, billbugs, chinch bugs, grubs, armyworms, chiggers, clover mites, crickets, ants, grasshoppers, mosquitoes, turf-grass weevils—they can all be formidable foes when it comes to unlocking the greatest possible return on your turf care investment. You need the kind of product performance security you get from The Andersons.

With The Andersons' line-up of high-quality Tee Time fertilizer/insecticide combinations *with* Dursban, you get all the selection flexibility you need to meet your specific insecticide requirements. What's more, you also earn the added economies of single application products that feed *while simultaneously* controlling bugs.

You can bank on Tee Time 30-3-5 *with* Dursban—38-0-0 and 18-3-5 *with* Dursban—Tee Time triple-action 20-4-10 *with* Dursban *and* Balan® for feeding, weeding, and insect control—and Tee Time straight formula Dursban 2.5G.

The Andersons purchases technical Dursban in large, economical bulk quantity. Then, it carefully and expertly incorporates it in its computerized state-of-the-art production facility. The result? Safe, consistent, accurate formulations—quality assured—and performance proven. Value to you that's right on the money.

For the best return on your turf care investment, rely on your close-by Tee Time distributor. He'll tell you more about the big dividends you earn when you bank on performance yielding Tee Time/Dursban combinations from The Andersons.

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whatever your turf problem Lebanon Turf Products have the answer.

To control any turf problem, you must have the right product.

Lebanon Chemical is the leader in solving these problems with dependable, tested, and time-proven products. Greenskeeper and Country Club combination homogenous fertilizer and control formulas, along with Lebanon Pro SCU products are exactly right for your needs. How do we know? Through extensive university and end-user test results. Lebanon also carries a complete line of granular control products — not just a few. Formulations for crabgrass, broadleaf weeds, fungus and insect control and prevention are all available. Lebanon Chemical is experienced in working with superintendents, turf managers and lawn care applicators successfully, economically and efficiently.

Lebanon — we're working from the ground up to bring you better turf. Let Lebanon work with *you*.

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Circle No. 126 on Reader Inquiry Card

JOBTALK

by Richard Williston, director, safety and education, National Arborist Association, Inc.

Pruning: A practical approach

While arborists are well aware of the advantages of pruning deciduous trees at certain times of the year, they must also remember how the needs of clients and certain locations affect their pruning schedules.

Many times the arborist is the last in line when it comes to deciding when to prune. The customer comes first. You'll prune on Mondays if that's the only day of the week that a golf course is closed. Six months of rainy Mondays will put you further behind schedule, and if an insect problem pops up, expect to sit back and wait until that crisis is resolved.

Commercial arborists don't have the luxury of choosing pruning times based solely on what's best for the tree. While the researchers and horticulturists who publish pruning guides can restrict their attention to the tree's needs, you have to consider your clients' desire to have the job done on time as well.

The vigor of the tree to be pruned and the type of pruning to be performed may more critical in your timing decision than just the season. Removing only dead limbs from a vigorous tree means you can prune at almost any time, while drastic work on an ancient and well-placed specimen will require more planning.

Don't neglect to consider the impact of pruning frequency when looking at your schedule, either. If a tree is pruned often, it probably doesn't make too much difference when the job is performed. Since only small cuts are made and little canopy removed at any one time, different pruning times would have no long-term effects on overall tree health. But timing becomes critical when you're removing several limbs from a previously-unpruned specimen.

Finally, remember that quality of workmanship is more important to the tree's health than picking the proper time. Pruning at an advantageous moment makes little difference if your cuts contribute to long-term tree damage.

Since the real world demands that you prune year-round, the old saying, "the time to prune when the saw is sharp" makes more sense than ever.

WOODS New Compact Backhoes... the sure-footed way to dig in!

The new Woods Models 650 and 750 utility backhoes can outperform others their size (and larger) digging footings, irrigation ditches, drainage ditches, wiring trenches, and for landscaping.

They offer control . . . and safety. Two lever control of all functions: reaching, digging, lifting, swinging and dumping. It couldn't be easier. And Woods' exclusive "Saf-T-Lok®" mount which eliminates side-to-side free-play movement of the 3-point hitch, their wide stance cantilevered stabilizers, and their self-contained independent hydraulics make sure they go where they're put . . . and stay put. Woods' 162° bucket curl gives maximum breakout and full "bite", keeps material in the bucket, and tucks away for safe convenient transport between jobs. The operator platform, with adjustable seat, puts him where he can see his work, and perform safely and comfortably.

And they give a choice. Model 650 reaches 7'10" and will dig 6'6" deep from tractors rated 18-35 hp with standard category 1, 3-point hitch. Model 750 reaches out 9'4" and down 7'6" from 20-40 hp tractors.

Get the "full scoop" on these top performers today. Send for complete specifications.

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New Rubigan™ sends these And then some.

Unwanted, unloved, unwarranted. So the logical course of action is to evict these tenants before they call your turf their own.

Broad spectrum control. Dollar spot (even fungicide resistant strains), large brown patch, fusarium blight, stripe smut and pink or gray snow mold—all these blots on the turfgrass can now be effectively controlled by Rubigan. And, if other undesirables are lurking in the neighborhood, Rubigan is compatible with most contact or systemic fungicides commonly used on turf.

Preventive and curative action. Rubigan provides you with the flexibility to manage a disease prevention program and at slightly higher rates, provides curative action on dollar spot and large brown patch. More to the point, Rubigan acts as an enforcer that prevents turf diseases from making themselves feel at home on tees, greens and fairways.

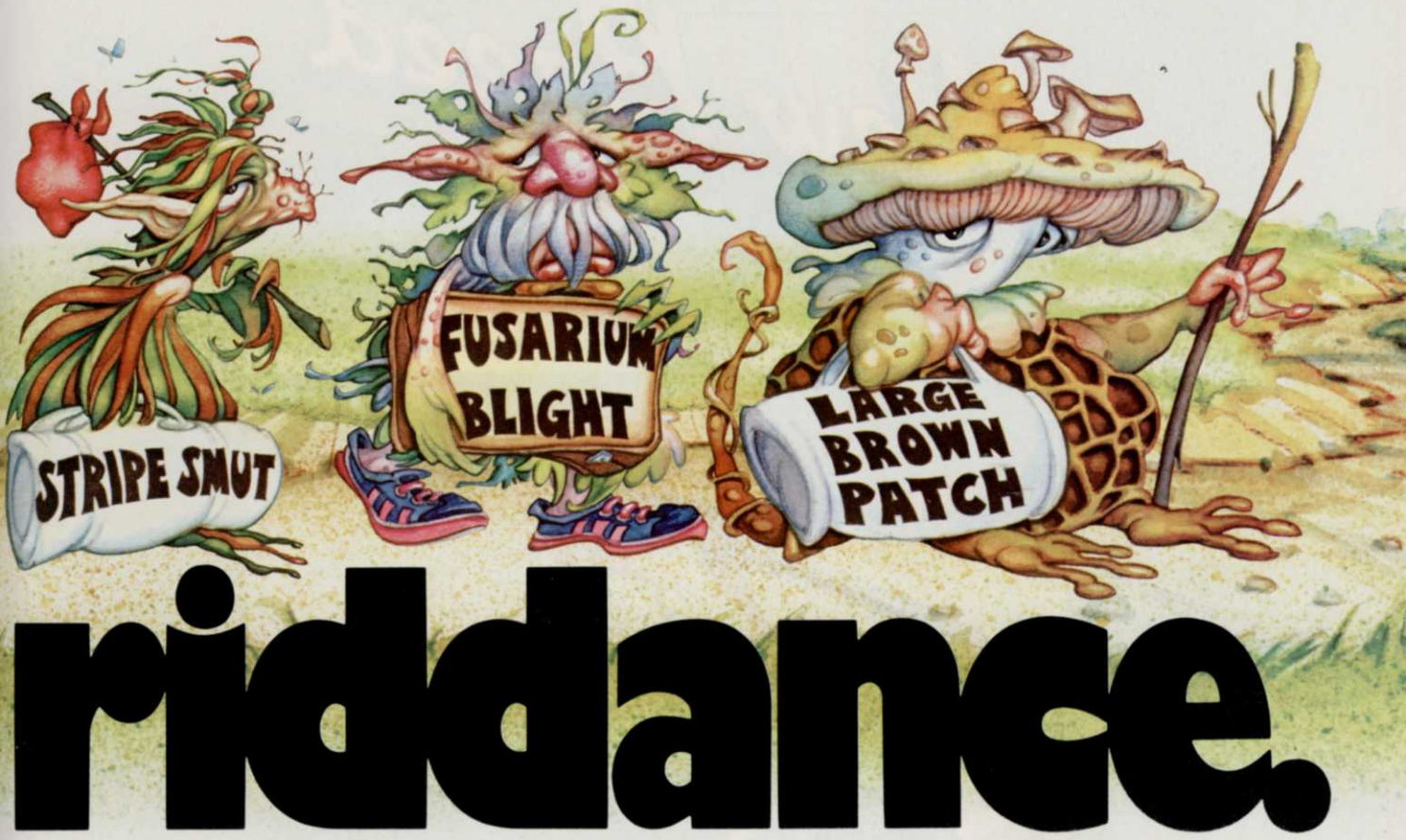
Unlikely development of resistance. Rubigan has a mode of action involving three or more sites of inhibition. (A multi-site inhibitor.) Years of successful use outside of the U.S., as well as trial usage in the U.S., have shown that susceptible fungi commonly found in turf have not been able to develop resistance to Rubigan.

Longer-lasting control. Rubigan is a very active, concentrated product. Long lasting control allows for longer intervals between spraying. You can reduce the number of application trips and save on fuel and labor costs. What's more, lower use rates mean less storage and lower handling costs.

Rapid leaf penetration. Rubigan is a foliar-applied, locally systemic fungicide. It is absorbed almost immediately into leaf tissue and is not susceptible to washoff by rainfall or irrigation once the spray has dried. While the spray is drying, the active ingredient sets up shop inside the plant where it can't be washed out. Disease protection begins immediately after application.

Excellent turfgrass safety. No adverse effects or discoloration occurs when Rubigan is used at

Rubigan™ EPA Experimental Use Permit No. 1471-EUP-50.



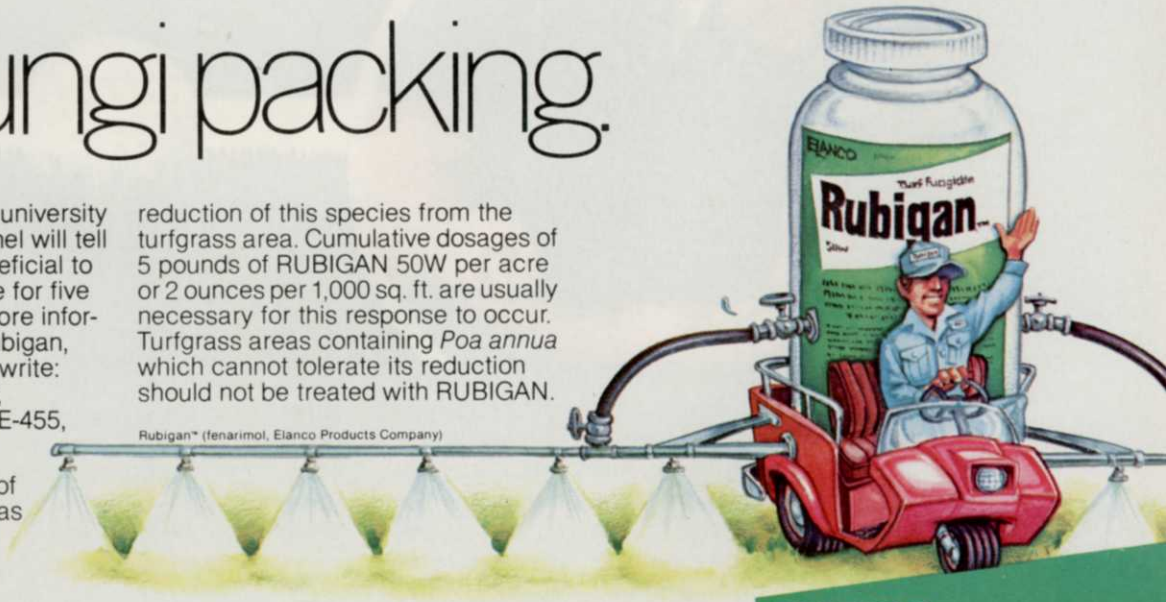
riddance.

turf fungi packing.

recommended rates. Your university turfgrass research personnel will tell you that Rubigan is as beneficial to your turf as it is destructive for five major turf diseases. For more information on cost-efficient Rubigan, contact your distributor or write: Elanco Products Company, 740 S. Alabama St., Dept. E-455, Indianapolis, IN 46285.

Precautions: Applications of RUBIGAN to turfgrass areas containing *Poa annua* (annual bluegrass) may result in the gradual reduction of this species from the turfgrass area. Cumulative dosages of 5 pounds of RUBIGAN 50W per acre or 2 ounces per 1,000 sq. ft. are usually necessary for this response to occur. Turfgrass areas containing *Poa annua* which cannot tolerate its reduction should not be treated with RUBIGAN.

Rubigan™ (fenarimol, Elanco Products Company)



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in Turf-type Tall Fescue

Meet **Mustang**-the new turf-type tall fescue whose extraordinary turf quality, heat/drought tolerance and dark green color make it a breed apart from the others.

Turf data from major universities rank Mustang **superior** in seedling vigor, turf performance, and disease resistance. You demand excellence in your turf management, so why settle for anything less in your choice of a tall fescue...**demand** Mustang!

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Circle No. 143 on Reader Inquiry Card

PRODUCTS

Jacobsen Turfcat gets flail mower

A flail mower designed to put a smooth finish on rough turf has been introduced by Jacobsen Division of Textron Inc.

The new flail unit attaches to Jacobsen's recently introduced Turfcat II DW 220 riding mower.

Described as a "vertical rotary mower," the 60-inch flail cuts by revolving a double spiral of tabs fixed to a cylindrical rotor.

Rotation is clockwise with uniform discharge to the rear from the 11-gauge steel housing which is offset to the left for trimming. Using brake assist, the Turfcat II with flail mower can achieve a zero uncut circle. Height of cut can be adjusted for 3/4-inch to 3-1/4 inch increments, without the use of tools.

To follow surface irregularities, the flail mower's mounting is fully articulated, side-to-side and fore-and-aft, as it is for all Turfcat II implement attachments.

The diesel-powered Turfcat II DW 220 offers hydraulic cutting and can be equipped with 60-inch rear or side discharge rotary decks, a 72-inch rear or side deck, a 60-inch rotary broom, a 51-inch snowthrower or a 54-inch dozer blade. A pin mounting simplifies attachment of any implement, allowing the machine to go from one task to another. Jacobsen reports that the new flail mower's capacity is 2.8 acres of rough turf per hour.

Circle No. 185 on Reader Inquiry Card

Water-permeable fabric reduces maintenance

The Du Pont Company has introduced a new permeable landscape fabric that promotes healthier plants and reduces routine maintenance.

Unlike plastic film, Du Pont Landscape Fabric lets water pass through to plant roots while controlling weed growth. Because water passes through rather than flowing off, the Du Pont fabric minimizes wash away of gravel or mulch. The mulch layer remains intact to slow evaporation and moisture loss.

The material is chemically inert. The barrier does not have to be removed to treat plants with liquid herbicides, fertilizers and insecticides. They flow easily through to the soil without damaging the sheeting. Du Pont Landscape Fabric also resists mildew, rotting and decay for

PROMARK WAS HERE.

The family of easy-to-use, portable grinders that turn stumps and surface roots into chips (and mulch) in just seconds!

STARTING AT ONLY $1995

PROMARK Model 16D (Deluxe) STUMP AND ROOT GRINDER

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PROMARK Model M-16 STUMP AND ROOT GRINDER

Promark stump and root grinders have been the international standard in landscape maintenance since 1978.

They are the field-tested first choice of professionals with responsibilities that require quality equipment.

All Promark models have been specifically designed to fill the needs of commercial landscapers, arborists, parks, municipalities, and rental yard operators for small, portable, high-performance units easily operated by one man.

Write or phone today for more information.

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HERE'S PROOF SEEDING WITH HYDRO MULCH* FIBERS CAN QUICKLY PUT YOUR PROJECT IN THE BLACK.

Compare the *total installed cost* of HYDRO MULCH fibers to ordinary straw for turf establishment.

	Hydraulic Mulching (2 people) ($12 per hour)	*Straw Mulching (6 people) ($12 per hour)*
HIDDEN OVERHEAD *1. Start-up* • *Pick up* • *Prep & load equipment* • *Travel time* • *Set up*	$30	$156
2. Shut-down • *Break time* • *Clean-up* • *Loading* • *Travel time*	$60	$216
TOTAL OVERHEAD	$90	$372
VARIABLE COSTS *1. Materials (per acre)* • *1500 lbs HYDRO MULCH fibers vs. 100 straw bails*	$200	$125
2. Application (per acre) • *Hydro seed, fertilize, apply HYDRO MULCH fibers vs. hydro seed, fertilize, apply straw, crimp*	$31	$39
3. Equipment (per acre) • *Fuel, maintenance, depreciation*	$30	$50
***TOTAL VARIABLE** (per acre)*	$261	$214
TOTAL INSTALLED COST	$351	$586

In many of today's projects, hydraulic mulching with HYDRO MULCH fibers can be less costly than straw mulching. That's because there's usually less hidden overhead. So while savings vary from project to project, you owe it to yourself to find out more. After all, the results are in black and white.

To see if Conwed can save you money on your next project, call (612) 221-1196. Or write us: Conwed Corporation, Fibers Division, P.O. Box 43237, St. Paul, MN 55164.

*HYDRO MULCH is a federally registered trademark of Conwed Corporation. Any use of HYDRO MULCH beyond reference to Conwed's wood fiber mulch may constitute infringement under the Trademark Laws of the United States.

CONWED

innovative products for better environments

Circle No. 107 on Reader Inquiry Card

long service life. It is applied by rolling out over new plantings and an "X" is cut into the fabric. Plants are gently pulled through the hole. Excess fabric is folded under itself and covered with mulch. The product is available at local retail and wholesale nurseries.

Circle No. 186 on Reader Inquiry Card

New transplant system from Trans-Tree

A one-man system for digging, transporting and transplanting four mature trees has been introduced by Trans-Tree of Minneapolis. The Trans-Tree TTC-60 system combines a truck-mounted hydraulic tree spade and

special dual axle trailer with four metal cones to provide all work operations for mature trees with maximum 6-inch diameters. The curved blade tree spade fits the tiltable cones to ease placing and removing trees, root systems and soils from the cones. The spade unit is designed for mounting on a close-coupled dual axle 2-1/2 ton truck equipped with a 350-400 CID engine with PTO service.

Circle No. 187 on Reader Inquiry Card

New deposition aid improves spraying results

Sta-Put Deposition Aid, developed and manufactured by Nalco Chemical Company, will increase the amount of chemicals reaching the target within the spray swath.

Sta-Put increases the placement of farm chemicals, thereby increasing the consistency of performance by up to 30 percent. By increasing spraying effectiveness, a deposition aid minimizes potential complaints and call-back situations and reduces the chances of having to redo an area.

Sta-Put stabilizes spray droplet size, thereby creating a more efficient spray pattern. Furthermore, uniform droplet size helps minimize "fines" and their resultant premature evaporation. It does this by insuring that more spray solution actually reaches the target area.

We promise to tell the truth the whole truth and nothing but the truth. So help us BPA.

As a member of BPA (Business Publications Audit of Circulation, Inc.) this magazine subscribes to the principle that it takes more than good faith to earn the business of advertisers. It takes good figures.

BPA, an independent, not-for-profit organization, audits our circulation data to make sure that advertisers get exactly what they pay for: you.

Once a year, BPA auditors examine our circulation list to make sure it's correct and up to date.

The audit makes sure you are who we say you are. It verifies your name, your company, your industry and your job title. This information enables our advertisers to determine if they're saying the right thing to the right people in the right place.

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INCREDIBLE

The HUSTLER Range Wing™ more than doubles your mowing capacity at about half the price of competitive units.

The incredible HUSTLER Range Wing maintains big acreage effortlessly. With three hydraulically lowered and raised decks spreading over 12-foot wide, you can cut a whopping 62 acres of turf a day. And, because each deck floats independently to follow ground contour, scalping is virtually eliminated. The result is a smooth, uniform cut that will make both the turf and you look very good.

Combined with the HUSTLER tractor's drive-wheel steering and dual hydrostatics, you'll find that the Range Wing performs with exceptional mowing maneuverability compared to large, tractor-pulled gang mowers.

Although the Range Wing was specially designed for the fuel-efficient diesel HUSTLER 305 D, there's also a 9-foot single wing version for the HUSTLER 295.

You must agree, the benefits are clear. With the HUSTLER Range Wing, you'll save time, money and operator fatigue while enjoying increased productivity. That's why HUSTLER is... worth the difference.

An automatic clutch on each wing disengages blades when wing is raised. When cutting grass around lakes or ponds, the tractor's drive-wheels remain 4-foot up from the bank's edge for traction and control.

There are six HUSTLER models ranging from 18 to 32 hp with a host of attachments to meet year-round needs.

EXCEL HUSTLER Turf & Grounds Equipment

Call Toll-Free,

1-800-835-3260

or write for free literature:
EXCEL INDUSTRIES, INC.,
P.O. Box 7000, Hesston, KS 67062

EXL-1-184

Circle No. 116 on Reader Inquiry Card

Sta-Put is easy for custom applicators to use. A measured amount of Sta-Put is measured into the spray tank while it is agitating. Sta-Put does not settle or lose activity when diluted.

Circle No. 188 on Reader Inquiry Card

New broad-spectrum from Cynamid

Arsenal herbicide, a broad-spectrum, postemergent systemic will be on the shelves starting next year after four years of testing in the U.S., Europe and the Far East. Applicable as a contact herbicide any time the vegetation is actively growing, Arsenal penetrates through both foliage and roots to the growing center of the plant. Growth ceases shortly after application, but complete kill can take up to two weeks. There is no fire hazard from undesirable quick-burn or brown-out. In perennials, the herbicide kills underground storage organs to prevent regrowth.

Circle No. 189 on Reader Inquiry Card

Accurate delivery with HB-Aqua

Del Rio of California, Fresno, is marketing a drip irrigation emitter that operates with constant and accurate delivery the full length of the line. The HB-Aqua emitter distributes approximately 3/4 gallon of water per hour at 14 PSI and above the full length of the line up to 1,000 feet. Drip irrigation on slopes will be delivered evenly while compensating for any pressure loss with this device.

Circle No. 190 on Reader Inquiry Card

Soil Seal for erosion control

The Soil Seal Corp. has a new soil stabilization product for erosion control, dust abatement and mulch tackifying. Soil Seal Concentrate forms a crust between 1/8 to 1-1/2 inches thick, depending on dilution and soil characteristics, to stabilize areas being prepared for seeding. The solution can be sprayed on existing vegetation without harmful effects, although delicate plants should be avoided.

Circle No. 191 on Reader Inquiry Card

Sand-Aid makes market debut

Following a successful year in selective test markets, Emerald Isle, Ltd. will introduce Sand-Aid nationally for the 1984 season.

For Superb Turf at the Super Bowl, Turf Wizard George Toma Specifies Ph.D.®

George Toma's regular job is turf manager for the Kansas City Chiefs and Kansas City Royals, but he is also turf consultant to the National Football League.

That's why he is responsible for preparing the turf for Super Bowl games. Because it's vital that the turf be right for the players, the fans *and* the television cameras, George Toma uses Ph.D.® overseeding blend.

"Ph.D.® is ideal for the Super Bowl because it germinates rapidly, quickly develops a strong root system, has excellent color and stands up to the punishment given it by the pros," Toma says.

Ph.D.® is a blend of three modern turf-type perennial ryegrasses including Derby and Regal, two of the most highly regarded grasses available to the turf manager today.

Turf managers count on Ph.D.® to thrive in a wide variety of soils ranging from sandy to heavy clay. Germination is normal in 7-10 days.

Ph.D.® is used for permanent turf in Northern regions and for overseeding of dormant winter turf in the South.

Ph.D.®

is a Product of

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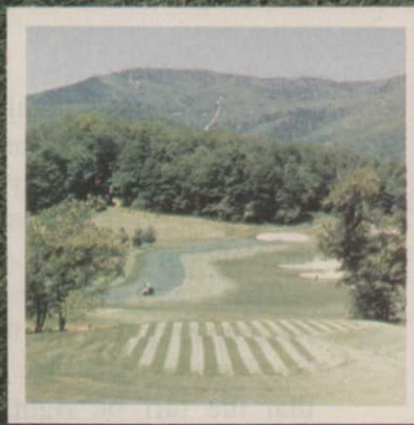
Tel. (503) 369-2251 TWX 510/590-0765

Circle No. 124 on Reader Inquiry Card

TO STAY ON THE RIGHT COURSE, COLOR YOUR WAY FROM TEE TO GREEN.

When you mix Blazon™ Spray Pattern Indicator with herbicides, fungicides, insecticides, and liquid fertilizers, you can see exactly where you've sprayed, helping to prevent costly overlap and/or missed areas. ¶ The color pattern is temporary and dissipates with rain, heavy dew, normal sprinkling, or even with sunlight alone. ¶ You'll be able to apply a uniform spray everywhere your tank sprayer or tractor goes, including areas around bunkers and across contours and hills. ¶ And while Blazon itself is environmentally safe and does not permanently stain hands, clothing, or equipment, it lets you know exactly where potentially harmful chemicals are. ¶ Best of all, you're turning an educated guess into an applied science, making for a better golf course and a better-looking bottom line. For further information, contact Milliken Chemical, P.O. Box 817, Inman, South Carolina 29349, 800-845-8502.



MILLIKEN CHEMICALS

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Milpitas, CA 95035
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ARIZONA NEVEDA, SOUTHERN CALIFORNIA
Target Chemical Co.
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CANADA
Deisgn Yarns
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Montreal 308,
Quebec
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CALL 1·800·845·8502 FOR FURTHER INFORMATION ABOUT BLAZON DISTRIBUTORS IN YOUR AREA.

Like the company's companion product, Panasea, Sand-Aid is produced from North Atlantic sea plants.

Panasea is a liquified sea plant extract used primarily to strengthen root systems and improve stress tolerance in turfgrasses. Sand-Aid is a granular sea plant meal designed to be used as a soil conditioner to counteract compaction and also as a natural, organic constituent in topdressing mixtures to increase nutrient and moisture retention.

According to Emerald Isle's President, Bill Middleton, Sand-Aid is completely unique in that it improves both clay and sandy soils. It contains alginic acid (a polyelectrolyte). This natural carbohydrate, which makes up 26.7 percent of Sand-Aid's material analysis, creates an electrochemical attraction between fine particles in heavy clay soils, causing them to aggregate into a more friable, less compacted structure. In light sandy soils, on the other hand, where moisture and nutrient leaching can be a problem, Sand-Aid acts as an emulsifier, forming a highly desirable porous aggregate, greatly increasing nutrient retention and substantially reducing water losses.

Sand-Aid can be applied by itself or combined with gypsum to counteract soil compaction. For best results, it should be applied after aerification with a rotary or drop spreader.

Circle No. 178 on Reader Inquiry Card

Aliette receives federal registration

Aliette 80WP fungicide has received a federal registration for use on ornamentals to control Phytothphora root rot, according to the manufacturer, Rhone-Poulenc Inc., Agrochemical Division.

Aliette may be applied as a drench or soil incorporated. The product is unique in that is has two-way systemic activity, showing both upward and downward translocation.

Aliette has been used worldwide for six years without developing a single case of resistant fungal strains.

Circle No. 179 on Reader Inquiry Card

Tree Spade handles 7-14-inch trunks

With eight narrow independent blades, the Stocker '8' low-profile

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Tree Spade digs through tough clay, root masses and dense frost with a high tree survival rate. The Stocker Sales. Co. product also digs a round hole, which eliminates the need to align the spade when transplanting. Each blade is powered by a 2:1 gear rack drive driven by twin pistons. For each inch of piston travel a blade travels two inches, which eliminates the need for hydraulic towers that make transplanting near buildings and walls difficult.

Circle No. 180 on Reader Inquiry Card

No tank foaming with Foamtrine

If foaming in your spray tanks is a problem, a silicone-based emulsion called Foamtrine will eliminate it. The Allied Biochemists Inc. product alters surface tension and physical characteristics to prevent and eliminate foaming within a wide range of water qualities, pH and temperatures. The U.S.D.A. has recognized the product as safe in food and Foamtrine is also non-toxic to plants and animals. No visible residues will accumulate on treated foliage.

Circle No. 181 on Reader Inquiry Card

Montar for post-emergent control

Monteray Chemical Co. of Fresno CA has begun full-scale production of Montar herbicide for general post-emergent weed control. First introduced in 1958 as Phytar, Montar has been widely used in western states for controlling weeds on ditchbands, roadsides, sidewalks, driveways, fences near buildings and ornamentals and other non-crop areas. Montar mixes readily with water, is odor-free and is available in quart, gallon and five-gallon containers.

Circle No. 182 on Reader Inquiry Card

Whisper Chipper versatile tool

Asplundh's Whisper Chipper is a self-feeding unit that easily transforms large branches by a ten to one volume ratio for mulch and bedding chips. The chipper features four chrome-alloy steel blades locked in a cast steel rotor and an energy-storing flywheel to provide added torque for uninterrupted chipping. A unique operator guide attached to the feed table directs workmen to feed from the best places for loading brush into the chipper while an adjustable chute eases placement of chipped material.

Circle No. 183 on Reader Inquiry Card

Chloroneb, Terraneb SP attacks turf diseases

Kincaid Enterprises, Nitro, WV, has purchased the rights to manufacture Demosan and Tersan SP from the E.I. DuPont Co.

Because of trademark laws, the fungicides are marketed under the names Chloroneb and Terraneb SP.Chloroneb and Terraneb SP fungicides will systemically control Rhizoctonia solani, sclerotium rolfsi, pythium and snow mold.

Circle No. 184 on Reader Inquiry Card.

NOW PLANT

Young Trees

AT LOW

WHOLESALE PRICES

Colorado Blue Spruce plus 26 other evergreen varieties; Black Walnut plus 28 other deciduous trees including many hardwoods . . . and the **fast-growing HYBRID POPLAR.** Ideal for forestation, windbreak, wildlife shelter and food, soil conservation, increased property value. Low quantity prices.

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If there is not a distributor in your area contact:

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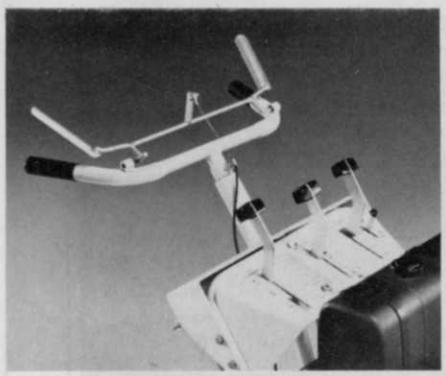
WITH NEW SENSA-MATIC™ STEERING OUR 48-INCH INTERMEDIATE HANDLES LIKE A SPORTS CAR.

Our new Sensation 48-Inch Intermediate is designed with a highly responsive steering system so it steers as easy as a sportscar. Just turn the steering handle to the left or right and a dual-independent braking system lets you effortlessly guide the Sensation around trees, rocks, posts and buildings.

Tight cornering is easy. With Sensa-Matic steering the 48-Inch Intermediate has an effective turning radius of zero. Essentially, it can turn on a dime.



GET THE WHOLE STORY ON SENSATION PERFORMANCE.

Along with the most advanced "handling system" in the industry, the Sensation 48-Inch Intermediate has other superior performance characteristics to help you cut grass faster and better.

With five forward speeds plus reverse you can adjust your ground speed while delivering optimum power and RPM's to the cutting blades. We've designed the Sensation 48-Inch Intermediate with maximum ground speed capability to let you mow quickly across wide open stretches and still get a smooth, uniform cut. It also operates smoothly at lower trimming speeds.

Our full floating deck provides a smooth, uniform cut and eliminates scalping. The unit also has an easy height adjustment.

Get the whole story on the Sensation 48-Inch Intermediate with Sensa-Matic steering. Clip the coupon today and send for our free four-color brochure.

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Division of Gilson Brothers Company
P.O. Box 536, Plymouth, WI 53073

Circle No. 152 on Reader Inquiry Card

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A NEW BREED OF MID-SIZE MOWER DESIGNED FOR THE LAWN CARE PROFESSIONAL MOWING LANDSCAPED AREAS.

Mows Fast because tractor maneuvers quickly with dual hydrostatic ground drive and lever steering. Many Walker mower owners are reporting their job time is cut ⅓ to ½.

- **Quick, easy maneuvering without gear shifting**
- **Zero turning radius steering**

Mows Easy with only fingertip pressure required on control levers to steer and maneuver. Comfortable operator seating, excellent visibility and convenient control location reduces operator fatigue.

- **36 or 42-inch cut**
- **Front mounted deck for unobstructed trimming**

Mows Beautiful because front mounted deck, flexible deck suspension and medium lift blades with center overlap provide smooth cutting action. The GHS vacuum thoroughly picks up grass clippings for a neat, clean appearance.

- **Internal grass catching system**
- **Compact overall size for maneuverability**

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Circle No. 162 on Reader Inquiry Card

Dobbins is the workhorse for the working pro.

If you need a day-in-day-out performer that'll handle all kinds of spraying jobs, get the workhorse. A Dobbins power sprayer. Every Dobbins is built smart and tough to help you cut any spraying job down to size.

- ***Professional design***...adjustable nozzle, easy-fill tank.
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DOBBINS POWER SPRAYER
THE WORKHORSE

Circle No. 130 on Reader Inquiry Card

EVENTS

MARCH

Arboriculture Meeting featuring Dr. Alex Shigo, March 2. Holiday Inn, Columbus, OH. Contact Alan D. Cook, executive director, Ohio Chapter, ISA, 7770 Jacksontown Road, SE, Newark, OH 43055.

ALCM Exposition, March 9 and 10. Sponsored by the Associated Landscape Contractors of Massachusetts and the Cooperative Extension Service of the University of Massachusetts at the Glen Ellen Country Club, Millis, MA. Contact ALCM, 1357 Washington St., West Newton, MA, 02165, (617) 964-0452.

California Certified Nurserymen Exam and Insect, Disease and Weed Exam, March 10. Quality Inn, Anaheim, CA. Contact CAN, 1419 21st St., Sacramento, CA 95814, (916) 448-2881.

California Certified Nurserymen Exam and Insect, Disease and Weed Exam, March 23. Oakland Hilton, Oakland, CA. Contact CAN, 1419 21st St., Sacramento, CA 95814, (916) 448-2881.

Canadian Turfgrass Conference and Show, March 11-14. Constellation Hotel, Toronto. Contact Mary Gurney, 698 Weston Road, Suite 32, Toronto, Ontario, M6N 3R3, (416) 767-2550.

Davey Tree Urban Forestry Foreman Training, March 19-30. Davey Environmental Services, 117 S. Water St., Kent, OH 44240, (800) 321-7572.

74th Annual Mississippi Valley Conference of State Highway and Transportation Departments, March 21-24. Hyatt Regency Hotel, Milwaukee, WI. Contact Harvey Shebesta, district director, Wisconsin Department of Transportation, 310 South West Ave., PO Box 649, Waukesha, WI 53187, (414) 548-5681.

Ohio State University Cooperative Extension Service, March 24. "Planting: Balled & Burlapped, Containers, Materials" (Fred Buscher); "Common Diseases and Plant Physiology of Ornamentals" (Nick Stephin); "Common Insects of Ornamentals" (Charles Behnke). For more information, contact OSU Extension Service, (216) 631-1890.

To insure that your event is included, please forward it, 90 days in advance, to: WEEDS TREES & TURF Events, 7500 Old Oak Boulevard, Cleveland, OH 44130.

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Month after month, nothing performs like IBDU in creating beautifully green turf for lawns, tees, fairways and greens. IBDU releases nitrogen later in the fall, earlier in the spring and more consistently through the summer than any other nitrogen source. Due to its slow, even release pattern, IBDU builds rich turf growth without early flushes and excess clippings.

IBDU is available only in PAR EX® fertilizers. PAR EX products feature IBDU mixed in a variety of formulations designed to satisfy your turf and soil conditions.

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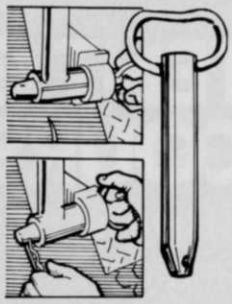
Circle No. 205 on Reader Inquiry Card

What makes the Cushman Turf-Care System worth the investment:

Aerating, hauling, dumping, spraying, seeding, spreading and top dressing — one vehicle does the work of a fleet of machines.

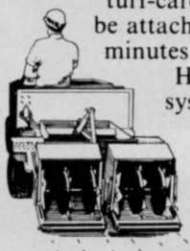


The exclusive Cushman pin disconnect system lets you attach and remove accessories in minutes.

The economics behind your decision to invest in the Cushman Turf-Care System are hard to argue with:

Here is a single vehicle that can do the work of a half dozen machines, at a fraction of the cost.

Here is a complete set of turf-care accessories that can be attached or removed in minutes.



Here is a groundskeeping system that's so simple, and so well-crafted, your maintenance and repair time will become practically non-existent.

Economics aside, though, there is an even stronger reason to invest in the Cushman System.

Results.

The Turf-Truckster™.

Powered by a rugged 18 hp air-cooled engine, the Cushman Turf-Truckster has the stamina to survive years of constant use.

A 3-speed syncromesh transmission, hydraulic brakes, heavy-duty suspension and a ¾-ton payload capacity are all standard. And you can choose between a 3-wheel or 4-wheel design.

By itself, the Turf-Truckster is the industry's state-of-the-art work vehicle.

But team it up with any of the following accessories, and you have the makings of an efficient, economical turf-care system.

The aerators.

Because you have two types of turf to aerate, Cushman makes two aerator attachments for your Turf-Truckster.

The Greensaver® is ideal for greens and other delicate areas. Interchangeable aerating drums let you select the precise degree of aeration needed — ½″ cores for fast-growth seasons, ⅜″ cores for slow-growth months, and deep-slicing tines for summer hot spells.

For the rest of your grounds, simply attach the Quick Aerator to your Turf-Truckster. It offers the same choice in aeration tines as the Greensaver, but covers a wide 46″ swath.

The dump boxes.

To haul fertilizer, dirt, sand and other supplies, choose our Short Box attachment. It handles 1500-lb. payloads, sits low to the ground for easy loading and can be hydraulically dumped right from the driver's seat.

But for maximum versatility, you may prefer our Flatbed/Box attachment. It does everything the Short Box does, but converts to a flatbed carrier just by removing the sides and tailgate.

The sprayer.

Turf pros swear by this as the finest spraying machine they've ever used. And it's no wonder when you consider all you get:

Uniform spraying controlled by your vehicle's ground speed governor; a PTO-operated centrifugal pump; and your choice of either a 100-gal. tank with a 15′ rear boom, or our new 150-gal. tank with a 21′ rear boom.

Plus, you can add a versatile handgun attachment for fogging bushes and spraying trees.

The spreader/seeder.

Mounted on either side of the two Cushman dump boxes, the Spreader/Seeder attachment actually outperforms units costing much more.

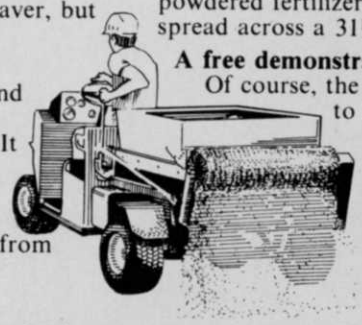
The spreading rate is regulated by your Turf-Truckster's ground speed governor. Even over irregular terrain, you get uniform spreading.

The corrosion-resistant hopper holds up to 300 pounds of material, and spreads it evenly across a swath up to 40 feet.

The top dresser.

Just 3 pins connect the Top Dresser to your Turf-Truckster chassis, and you're ready to top dress up to 220 feet per minute.

Everything from rock salt to powdered fertilizer can be uniformly spread across a 31½″ swath.



A free demonstration.

Of course, the best way for you to learn about the Cushman Turf-Care System is to see it in action. On your grounds. To do that, just call us toll-free: **1-800-228-4444.**

Circle No. 110 on Reader Inquiry Card

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WHAT'S BETTER THAN SPEED READING?

SPEED LEARNING

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Speed Learning is replacing speed reading. It's easy to learn...lasts a lifetime...applies to everything you read...and is the only accredited course with the option of college or continuing education credits.

Do you have too much to read and too little time to read it? Do you mentally pronounce each word as you read? Do you frequently have to go back and re-read words or whole paragraphs you just finished reading? Do you have trouble concentrating? Do you quickly forget most of what you read?

If you answer "yes" to any of these questions — then here at last is the practical help you've been waiting for. Whether you read for business or pleasure, school or college, you will build exceptional skills from this major breakthrough in effective reading, created by Dr. Russell Stauffer at the University of Delaware.

Not just "speed reading" — but speed reading-thinking-understanding-remembering-and-learning

The new *Speed Learning Program* shows you step-by-proven-step how to increase your reading skill and speed, so you understand more, remember more and use more of everything you read. The typical remark made by the 75,000 slow readers who completed the *Speed Learning Program* was: "Why didn't someone teach me this a long time ago?" They were no longer held back by the lack of skills and poor reading habits. They could read almost as fast as they could think.

What makes Speed Learning so successful?

The new *Speed Learning Program* does not offer you a rehash of the usual eye-exercises, timing devices, costly gadgets you've probably heard about in connection with speed reading courses or even tried and found ineffective.

In just a few spare minutes a day of easy reading and exciting listening, you discover an entirely new way to read and think — a radical departure from anything you have ever seen or heard about. Research shows that reading is 95% *thinking* and only 5% eye movement. Yet most of today's speed reading programs spend their time teaching you rapid eye movement (5% of the problem) and ignore the most important part (95%) *thinking*. In brief, *Speed Learning* gives you what speed reading *can't*.

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cate very well. Dormant tubers are not appreciably controlled and may be the reason nutsedge control was not satisfactory. Continue reapplying Basagran on actively growing plants until all of the tubers are gone.

Elm phloem necrosis

Problem: *I would like more information on phloem necrosis, the new disease attacking elms. (Illinois)*

Solution: The origin of elm phloem necrosis is unknown, but apparently it has been around since about 1882. Perhaps because of all the attention given to Dutch elm disease, other diseases of elm have been overlooked or forgotten. Rediscovery or more frequent mention of phloem necrosis may stem from work being done using the electron microscope.

The cause of phloem necrosis is something called a mollicute or mycoplasma-type organism. Loosely speaking, mollicutes are halfway between viruses and bacteria. They are microscopic in size and require special equipment to be seen. Phloem is a tissue found between the outer bark and the wood. Necrosis is the death of tissue; in this case, phloem. Healthy phloem is light-colored, usually white or off white. The phloem in trees with phloem necrosis is yellow, butterscotch (tan) or brown. Necrotic phloem is most evident near the base of the tree and has a wintergreen odor. Other symptoms include yellow leaves, drooping foliage and leaf fall. The foliar symptoms are similar to those of Dutch elm disease (DED) and for this reason, cannot be relied on.

There is no known cure for phloem necrosis. It is known that sucking insects called leafhoppers can carry the mollicute from tree to tree. Sprays to control the white-banded elm leafhopper have been recommended. The long-term solution may lie in the use of resistant trees. Asiatic and European species are less susceptible to phloem necrosis.

WT&T

Painting over ivy not advised

Problem: *One of our clients has exterior stucco walls ranging from two to five stories high partially covered with Boston ivy. The client would like to paint the walls using latex paints. Is it possible to spray paint over the vines when they are dormant without severe damage? (Oregon)*

Solution: Since paints can affect living plant tissues, try painting a small area of a wall to test for possible injury. Latex paint has been used without harm to tree trunks, however we do not have any information on this paint over Boston ivy.

You may consider pruning the ivy back, without damaging the main stems, before painting. Plants beginning to leaf out or with expanding leaves may have greater potential for exposure and injury. **WT&T**

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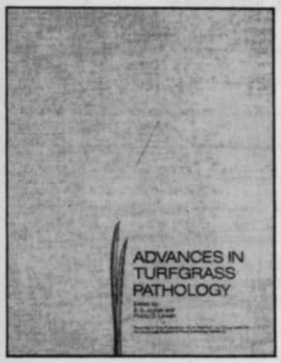

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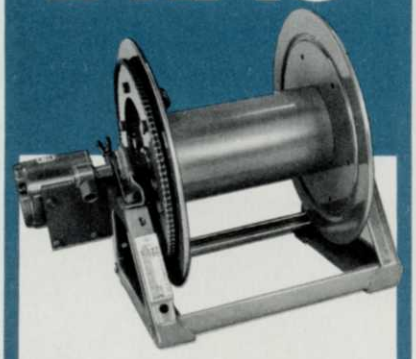

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Circle No. 120 on Reader Inquiry Card

ORR *from page 60*

sonal interest in what we do. Not too many people understand what we do and that ours is a profession that deals with living things."

Calculated ambitions

Orr keeps his own operation lean.

Ed Olson has worked as senior field supervisor and estimator for Orr for about seven years. Linda Crist has taken over about 60 percent of the estimating and does all of the scheduling of material delivery and purchasing. Orr's wife, Diane, is office manager and bookkeeper. There are three foremen in the field, each with five or six laborers. ("We're capable of doubling that capacity overnight," Orr said.) The company owns five pick-up trucks (two are 2-1/2-ton dumps), one Bobcat front-end skid loader with attachments and one 300-gallon spray tank.

"Most of the heavy stuff like grading, hydro-mulching and irrigation, we subcontract out," he said.

His modest office sits on an acre of land on Houston's west side. The backyard is a potpourri of one-of-a-kind plant leftovers, things "we've been too hard-headed to throw away."

Most of Orr's plant material comes from growers in Louisiana, California and Florida. He only grows a few larger containerized trees in the front yard of his office. Orr says his biggest technical problem is the Houston soil condition.

"Everything is clay and lots of bed preparation is necessary which makes it difficult. We are blessed with a good climate, though.

Orr's company is also blessed with a practical and realistic owner.

"I do suffer from blind ambition sometimes. I always knew I could compensate where I failed. But I know my limitations and my reputation is too important to me to go beyond those limits." **WT&T**

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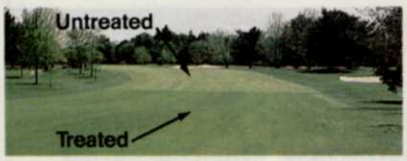

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SUCCESS *from page 52*

of expanding farther west than Chicago, but the Florida market is a ripe area. His nursery may also be another area of expansion in the future.

"We don't actively seek branches, but if we see good growth potential, we'll look into it."

Brickman feels competition is healthy and has no concerns about his company ever replacing the smaller landscape businessman.

"There's plenty of room for both," he says. "Just by the nature of how our companies do business, we define our market. Even our equipment is specialized for the type of business we do."

Brickman, a Howard-Price dealer, is proud of the 104-inch bat-wing rotary mower Howard developed and Brickman tested. It will be marketed this spring.

"This machine was created out of a need for this size mower in this market," Brickman said. "We see ourselves getting more and more involved in the development and dealership of equipment in the future."

Brickman's operation in Long Grove is unionized. He says it presents no problem.

"Where we run into a union situation we work with it and deal with the issues up front."

A legacy

Brickman was raised in Chicago. He and his wife, Sally, recently moved to Bryn Allyn, a northeast Philadelphia suburb, to be close to the Langhorne office. Two of Brickman's sons are following in their dad's and grandfather's footsteps. Steve is a salesman in maintenance operations for the company and Scott is a junior in landscape architecture at Penn State. A daughter, Sue, attends Sweet Briar College and another daughter, Julie, is a high school freshman.

Brickman is a licensed pilot who used to fly the company plane. With business responsibilities, his flying time was cut to a minimum. He still finds time to golf and play tennis. He is on the board of directors and is very active in The New Church, based in Bryn Allyn. He chairs the Associated Landscape Contractors of America's curriculum committee and is a past national president. He serves as treasurer of the Landscape Architecture Foundation.

Much of Dick Brickman's success has to lie with his ability to deal with people, especially his clients.

Not even being referred to as a "landscaper" by a client (which does happen occasionally), can dull his sensitivity to their needs.

"This is a people development business we're in," he said. "It is successful only to the degree it is committed to excellence. We constantly strive to meet the needs of the client. We can't force our ideas on them. The client is spending money to achieve a goal. The process is not important. The end result is.

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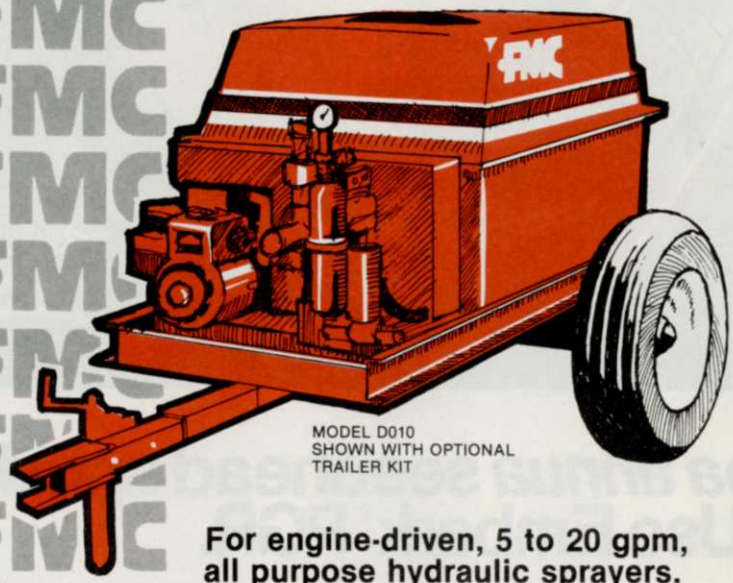

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"We come out of college with over-inflated ideas of who we are," Brickman continued. "We become so impressed with our own credentials. We must keep in mind the client and his wishes. As I get older, I see more of what the client's view of us is."

Brickman sees a need for more professionalism in the industry, especially in the maintenance area.

"What's happening now is we're seeing outside service companies coming in. In the next ten years, we'll see organizations coming in and contracting national sites with major real estate companies. It's already happening in the janitorial services. Not many landscape firms are up to that type of challenge at present. Within the next 10 years, I see a much greater influence on marketing in landscape architecture. I'm excited about the future. Awareness of us by the public is real. It's up to us (the industry) to decide whether we'll be a leader or a team player." **WT&T**

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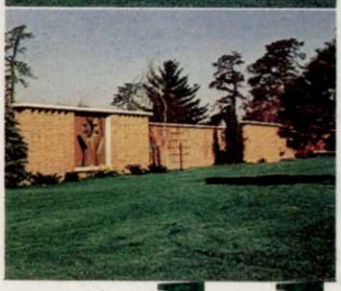

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1972 Ford F-600 tanker, 1200 gal. Beam 20-20 pump, hydraulic agitation refurbished, $8000.00. George 815-729-9233. 2/84

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SOFTWARE FOR SALE: Tree & Landscape, Co. Multi-company General Ledger, Accounts Payable, Accounts Receivable, Payroll Order Entry/ Processing Transportation and Billing. Written for Prime Computers - Documented. **FOR INFORMATION CONTACT:** J. Hetzler at (716) 436-2900. 2/84

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For Sale: Five R-7 Motorized Rotary Spreader, 4 tires, live front axle, all under 100 hrs. $750.00 each - Turfgard Company, P.O. Box 618, Troy, OH 45373, 1-513-339-3835. 4/84

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Toro Turf Pro 84, 23 H.P. Kohler Engine. Like new with 91 hours, 7 blade reels, $7500.00. R & R Lawn Service, Martins Creek, PA (215) 252-5046. 2/84

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WANTED — LANDSCAPE SALESMAN. Residential and commercial. Must be able to design and estimate. Degree in landscape architecture preferred. Benefits and commission. Send resume to: Edward's Tree Service and Landscaping, 49090 Cooper Foster Park Road, Amherst, OH 44001. 3/84

AUSTIN, TEXAS: Full-service Landscape Firm is looking for a dynamic individual with background experience in Landscape Management. Career opportunity to become part of a rapidly growing company in one of the countries fastest growing cities. Excellent salary and benefits. Send resume to WTT Box 338. 2/84

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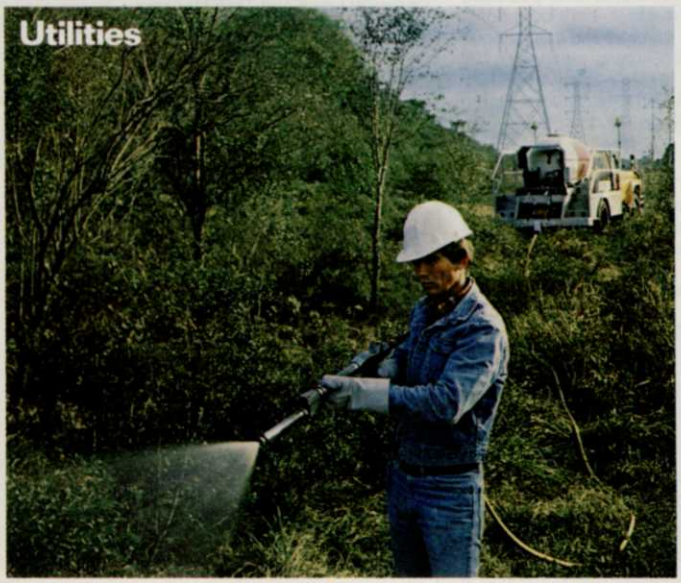

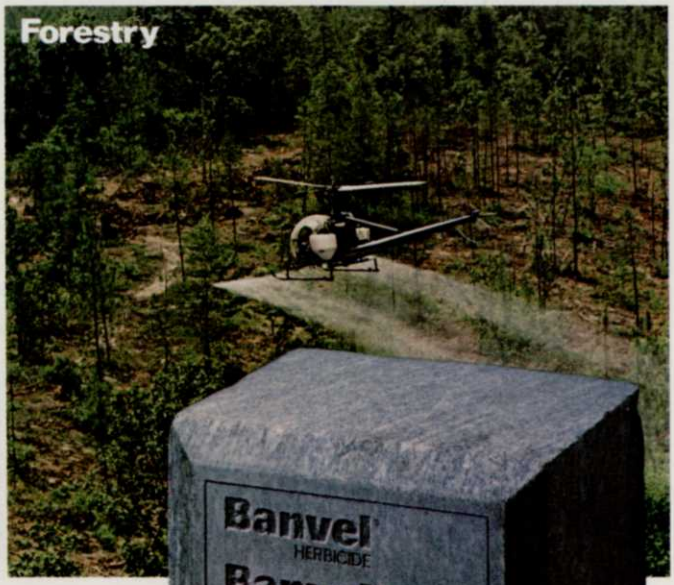

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Circle No. 160 on Reader Inquiry Card

EXPERIENCED MANAGER — What is required is an individual that is capable or experienced in running their own business but does not desire to. Duties include crew scheduling, field sales, daily office management. Growth oriented company (private tree care) wants growth oriented individual. Send resume to Tree Maintenance Servcice, Poughquag, NY 12570. Telephone: (914) 724-5065. 2/84

ZONE MANAGER wanted for rapidly expanding lawn company. Must be highly motivated with proven leadership qualities. Minimum of 2 years experience required. Our company offers one of the best opportunities in the industry (IF YOU HAVE WHAT IT TAKES!). Send resume to WTT Box 333. 2/84

General manager position open for chemical lawn and shrub division of established landscaping company in the sunbelt area. Tremendous opportunity for an aggressive individual having experience with a national or regional lawn care company. We are looking for a BUSINESSMAN — the very BEST!! Knowledge of turf grass, ornamental plants, and marketing needed. The right person will enjoy excellent salary, benefits, and opportunity for equity participation with unlimited earnings potential. Send complete resume including education, experience, and salary history. All replies will be kept confidential. Write WTT Box 325. TF

Horticulturist — Private Club 35 miles east of New York City on North Shore of Long Island, 300 plus acres. Experienced horticulturist to be responsible for the grounds and plantings at main clubhouse and five cottages. Work will interact with tennis and golf facilities. B.S. in horticulture or related field required. Must be familiar with insects and disease of ornamental plants and turf grass. Applicant should be capable of supervising others and possess good communications skills. Directly responsible to Grounds Superintendent. Excellent benefits. Salary commensurate with experience. Please send resume to: M.B. Lucas, Jr., Box 525, Locust Valley, N.Y. 11560. 2/84

LANDSCAPE MAINTENANCE SALES PERSON: Expanding, aggressive firm seeks sales representative for suburban Chicago market. Respondents must have experience in landscape maintenance on technical level as well as a sales background. Degreed person preferred. Send resume and salary history to: Manager, Route 2, Box 67, Elgin, Illinois 60120. TF

TREE AND SHRUB CARE — Branch Managers and Sales Managers. America's fastest growing tree and shrub care company seeking experienced, aggressive businessmen for existing and expansion markets. Experience, degree and motivation — key ingredients. Tremendous advancement opportunities. Excellent salary, benefits. All inquiries will be strictly confidential. Send resume, salary history to: Wm. Scott Carr, Tru Green Tree and Shrub Care, 2875 Northwind Dr., Suite 205, E. Lansing, MI 48823. Expand your potential with an industry leader. 2/84

LANDSCAPE MAINTENANCE MANAGER — KT ENTERPRISES, INC. A leading commercial landscape management company, serving the Washington D.C. Metropolitan market, is searching for the right individuals to manage the grounds care of our ever growing list of quality clients. Applicants must be goal oriented with leadership experience and a strong desire for quality and success. Growth opportunities unlimited and full benefits are provided. Send resume to: **KT ENTERPRISES, INC.**, Scott C. Plein, President, 5416 Oakwood Road, Alexandria, VA 22310. EOE. 2/84

BRANCH MANAGER wanted to grow with one of the fastest growing lawn companies. Must have at least 2 years proven experience with ability to motivate your people and make your branch profitable. Send resume to WTT Box 334. 2/84

PRODUCTION MANAGEMENT TRAINEE. Eastern region of expanding lawn care company seeking individuals to join their production managment team. If you have related degree in turf grass and/or experience in lawn care, we have a fast track training program to place you on our management team. Send resume and salary requirements. All replies will be kept confidential. Write WTT Box 337. 2/84

PARKS MAINTENANCE SUPERVISOR — Position available in the Metropolitan Atlanta area. Vacancy requires 3 years of experience supervising multiple crews engaged in comprehensive outdoor parks maintenance activities including but not limited to landscape management, parking lot and roadway repair. Herbicide and pesticide application, fencing and other work commonly associated with upkeep of parks and their various recreation sites. Starting annual salary $17,736 with excellent benefits. Please apply at Dekalb County Merit System, 1 Callaway Square, Room 208, 120 West Trinity Place, Decatur, GA 30030. EOE. 2/84

NEEDED — Climbing foreman — 3 years working experience, self-motivated, take charge capability, spray experience. Growth oriented company wants growth oriented individual for private tree care, benefits. Send resume to Tree Maintenance Service, Poughquag, NY 12570. Telephone: (914) 724-5065. 2/84

SOD FARM MANAGER: 500 acre Chicago-area operation seeks qualified manager. Involves production, irrigation, and harvesting. Excellent salary and benefits. Send resume to WTT Box 335. 3/84

LAWN CARE PROFESSIONALS needed for a rapidly growing East Coast lawn care company. Successful applicants should have a working knowledge of turf grass, fertilizers and pesticides. Good customer service abilities are required. Potential for advancement for the right individuals. Send resume and salary requirements. All replies will be kept confidential. Write WTT Box 336. 2/84

TURF Manager for sod farm. Three years management experience. Responsible for growing and marketing. Send resume and salary requirements to Pueblo of Sandia, P.O. Box 608, Bernalillo, NM 87004. 2/84

Arborist — Hort. degree or equivalent. Experience with climbing capabilities; know pruning, removal; disease and tree I.D., landscaping experience helpful. Pay and benefits commensurate with experience. Send resume to WTT Box 339. 2/84

WANTED

ACCOUNTS WANTED — National chemical lawn care company seeks accounts to acquire. Selling price open for negotiation. If interested, send name, address, phone number and number of accounts available to WTT Box 317. 3/84

WANTED: Large Lindig and Royer Shredders. Lewis Equipment, 320 Third Street S.W., Winter Haven, FL 33880. (813)294-5893. 6/84

Wanted - Toro-Vac grass sweeper. ArrowHead Sod Farm, 2803 South 104th E. Ave., Tulsa, Oklahoma 74129 (918) 622-4780. 2/84

Existing Lawn Care customer lists wanted from the greater Pittsburgh area. Franchises available throughout Pennsylvania. Write P.O. Box 11533, Pittsburgh, Pa. 15238. 2/84

Wanted to buy **HYDRO SEEDER**. Please send photo. Johnson Hydro Seeding Corp., l375l Travilah Road, Rockville, MD 20850, 301/340-0805. TF

CHIPPERS WANTED and stump machines, any condition. Will pay cash. Jim Kohler, 2330 Seneca Drive, York, Pa. 17404, 717-764-5103, 717-755-5307. 2/84

POSITION WANTED

Chemical Lawn and Tree Manager—Seeks challenging management position for established chemical lawn and tree company in Florida. Six years experience, with extensive knowledge of turf grass, ornamental plants, and marketing. Resume upon request. Write WTT Box 319.

MISCELLANEOUS

DIESEL HI-RANGER TOWERS—48-100 Feet working heights. Daily, weekly, monthly rentals with or without operator. MATLOCK LEASING, Pottstown, PA (215) 326-7711 or (800) 345-7711. 12/84

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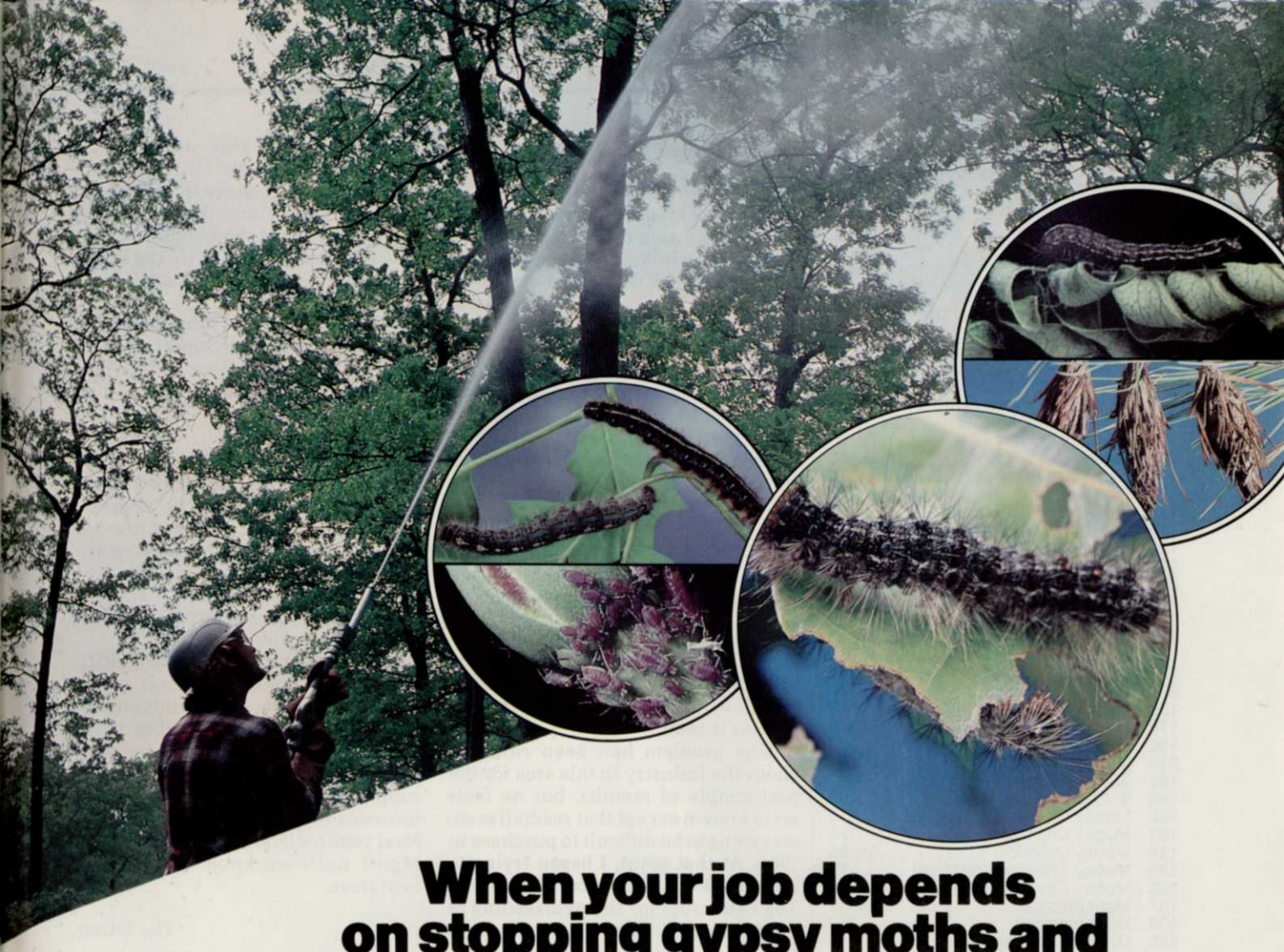

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Circle No. 104 on Reader Inquiry Card

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LETTERS

McVeigh fills ISI spot vacated by Pepin

In our Green Industry News section in October we reported a move by Dr. Gerry Pepin from International Seeds Inc., Hubbard, OR, to Pickseed West, Inc., Tangent, OR, left the research director position vacant at ISI. At the time we wrote the story we were unaware that Dr. Kevin McVeigh, who worked with Pepin at ISI, had been promoted to director of research.

ISI President J.L. Carnes says Pepin does not own turf seed patents for varieties marketed by ISI.

The Editor

Seed supply rumors need factual support

Congratulations are due you for bringing the seed harvest losses to the attention of buyers of the product, such as myself.

The problem had been rumored about the industry in this area for the past couple of months, but no facts were known except that seed(all seed) was going to be difficult to purchase in 1984. At that point, I began trying to buy my 1984 supply of certified Green Tag Penncross for the overseeding of my greens. To date, I have not been successful, yet, your article states "Bentgrasses were not hurt".

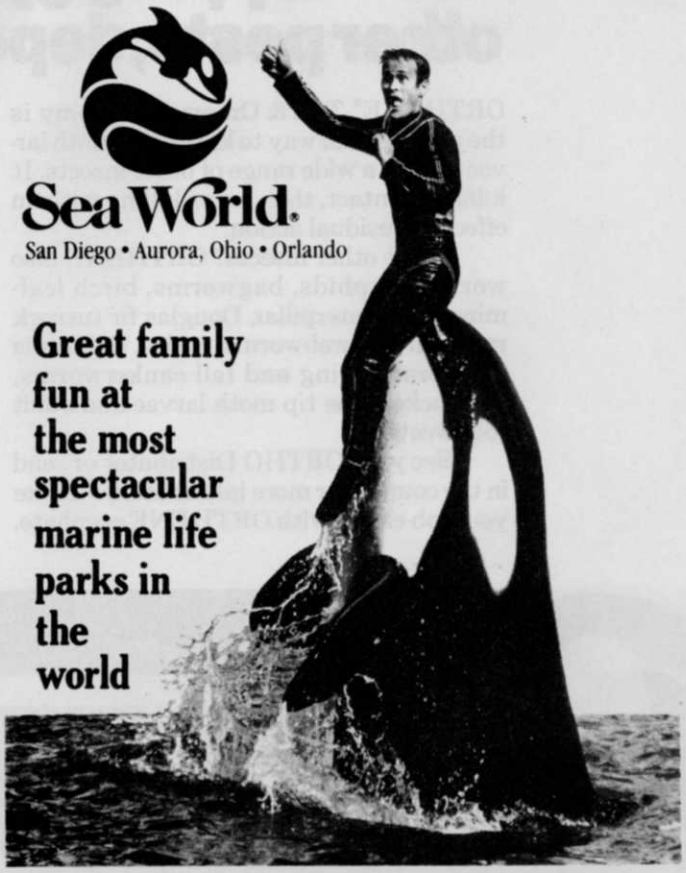
I wonder: 1) has the bentgrass picture changed since the printing of your article? 2)Is the bentgrass shortage in this area only? 3)Are the honest crop failures affecting all seed crops?

John O'Connell
Certified Golf Course Superintendent
Blue Rock Golf Course
South Yarmouth, Mass.

I can tell you what I saw with my own eyes while in Oregon in August. At that time, bentgrass had not yet been cut and swathed to dry. It looked fine and the seed growers didn't voice concern. The damage to fine fescues and ryegrass was very evident. Weeks of rain during harvest caused losses of 25 percent and more.

A few weeks after we left rain did hit the bentgrass in the field and caused severe losses. The delay between writing a magazine and printing it has caused our information gap. The bentgrass shortage is real. Your seed supplier's hands are tied. Sorry for the incorrect information on bentgrasses. Next year we'll hold publication of the report until we know the facts on bentgrass.

The Editor.



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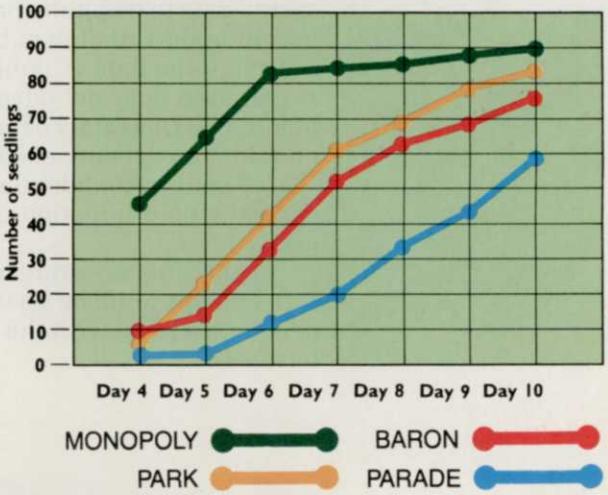

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Circle No. 167 on Reader Inquiry Card

EPA oversteps bounds claiming public domain of safety data

The rights of U.S. chemical manufacturers are being abused by the Environmental Protection Agency's interpretation of a poorly-constructed section of the Federal Insecticide Fungicide Rodenticide Act on data compensation.

Chemical companies have been, for the most part, good sports playing by a set of frequently-changed rules to get their products registered and on the market. Their lawyers, like quarterbacks, are forced to anticipate what obstacles EPA will put in their path during the registration process.

The latest word from EPA, regarding Monsanto's Supreme Court case against EPA and Stauffer Chemical Company, oversteps the government's authority over a corporation's property. The property in question is health and safety data, generated at great expense by chemical companies to meet registration requirements.

EPA is telling the Supreme Court this data, once submitted, becomes the property of EPA in exchange for the right of registration. The law provides an arbitration and compensation procedure under the direction of an EPA arbitrator. Only an EPA law judge can overrule the arbitrator's decision. In other words, once submitted, the final word on the value of data rests with EPA, not the chemical company who paid for it.

Monsanto can claim it has a price disadvantage. Other companies using Monsanto's data can charge less since they do not incur the cost of research to produce the data.

Stauffer, and other companies using 'me-too' data, are not guilty. They have been playing the game by EPA's rules.

If a loophole exists, they try it, possibly saving hundreds of thousands of dollars. EPA allowed a big loophole which completely overlooked antitrust implications of the data they were handling.

How EPA ever thought chemical companies would allow expensive 'trade secret' data to be public property is beyond common sense. It shows a complete lack of understanding of business.

Saying the data is public domain because it is a requirement for pesticide registration does not adequately protect chemical companies and their stockholders. Saying safety data is needed in case of emergency is valid, however, and I doubt if any chemical company would argue.

Use of this confidential data should be limited to making a company-by-company determination of benefits versus risk, and to help in cases of emergency.

Negotiating the value of the data between companies should not be an EPA function. It should be up to a company wanting to produce a 'me-too' product to negotiate a price with the original registrant of the data. That is fair and that is business.

Bruce F. Shank

by Bruce F. Shank, executive editor

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Prelude

turf-type perennial ryegrass

"Every 'new generation' brings with it something special. So it is with this new ryegrass . . ."

Rich Hurley

It's here. PRELUDE, a "new generation" ryegrass that sets new standards in all 'round performance. The ryegrass that far surpasses those most popular varieties of just a few years ago.

Through Lofts research program, breeding material was obtained from the New Jersey Agricultural Experiment Station, under the direction of Dr. C.R. Funk of Rutgers University. The results? Prelude, the turf-type perennial ryegrass that answers the professional's needs.

- Improved mowability
- Excellent heat and drought tolerance
- Good winter hardiness
- Good resistance to crown rust and brown patch
- Attractive dark green color
- Quick germination
- Fine-leafed, dense growth

This is the ryegrass the golf course superintendents and grounds care people have been waiting for. And it shows exceptional performance in Southern overseeding programs.

Try the "new generation" ryegrass . . . PRELUDE.

LOFTS

Lofts Seed Inc.

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Dr. Richard Hurley, Director of Research at Lofts Seed Inc., heads the company's continuous research programs which enable Lofts to maintain the enviable reputation of being a leader in the turf field with the introduction of superior, proprietary varieties.

Prelude is a product of Lofts Seed Inc. and Great Western Seed Co., Inc.

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